

## Outlook is Strong for Indiana Exports

Major economies in Asia are just now emerging from recession, but exports from Indiana businesses have increased for 11 straight years. In 1999, Indiana exports were up 4.2% over 1998.

“Expect Indiana export sales to grow even faster this year,” said Dr. Lawrence Davidson, professor of business economics and public policy at Indiana University’s Kelley School of Business and director of the university’s Global Business Information Network (<http://www.gbin.org>).

Indiana’s particular mix of export sales helped the state weather the recession in Asia. “Strong exports to Canada and Mexico allowed Indiana exports to grow in spite of the Asian crisis,” said Davidson. More than half of all Indiana export sales are shipped to Canada. Exports from Indiana to Mexico have nearly tripled since 1995.

“Trade volume worldwide should rise in 2000, according to data from the Organization for Economic

Cooperation and Development,” said Davidson. “Both Canada and Mexico will show good economic growth this year.”

The euro, the new common currency in much of Europe, is a potential problem. The value of the euro relative to the dollar has declined so far in 2000. This decline makes U.S. products more expensive in those countries. “The value of the euro is important to Indiana firms,” said Davidson. “A variety of factors have contributed to its weakness, but the fact remains that a declining euro will slow down sales of Hoosier products in Europe.”

Even though sales to European countries may be a challenge right now, other markets, especially in Latin America, are growing. “Through our network of foreign trade offices we can help companies explore their market potential in almost all areas of the globe and point out where

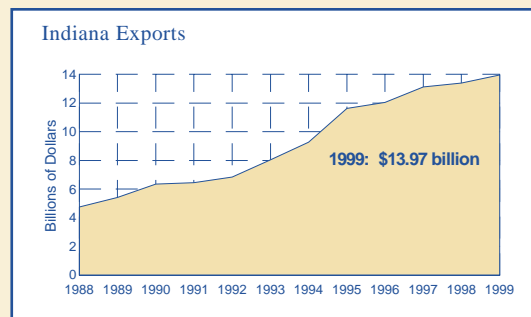
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### Indiana Exports Are Highlighted in This Issue

This issue highlights Indiana’s export trade. Indiana now ranks 15th among all U.S. states in total exports, up from 16th in 1998.



Indiana  
Unemployment Rate  
for March 2000:  
3.5%  
No Significant  
Change from  
February 2000

## Indiana Exports Hit New Record

Export sales from Indiana businesses reached \$13.97 billion in 1999, the highest one-year total in the state's history. Propelled by nearly \$4.1 billion in exports of transportation equipment, the increase in 1999 marked Indiana's 11th consecutive year of export increases. Figure 1 shows this steady expansion in exports, up from less than \$5 billion in 1988.

Data for 1999 were just released by the Indiana Department of Commerce (IDOC). The Global Business Information Network at the Kelley School of Business at Indiana

Indiana is the 15th largest exporter in the nation. 1999 marked Indiana's 11th consecutive year of export increases.

University compiles the export information originally collected by the U.S. Bureau of Census, analyzes it, and places it into a historical perspective. The IDOC, in partnership with Cinergy, publishes this analysis, along with the data, in the quarterly *Indiana Export Report*.

The rate of increase in Indiana exports peaked in 1995. The change each year in Indiana's export sales is shown in Figure 2, along with the

change in total U.S. exports. In the years 1993 through 1995, Indiana's exports grew nearly 20% per year. Indiana's rate of increase comfortably exceeded that of the nation. Since 1995, Indiana's export sales growth has averaged less than 5% per year. Export increases in recent years have been helped by the recovery of the

Mexican peso, NAFTA and the strong consumer demand for motor vehicles.

Indiana is the 15th largest exporter in the nation. Regionally, it falls in the middle of the pack in terms of total exports, although the state may contribute more to the region's exports than the data show (see Figure 3). If much of Indiana's output is assembled

Figure 1: Indiana Exports, 1988-99, in Billions of Dollars

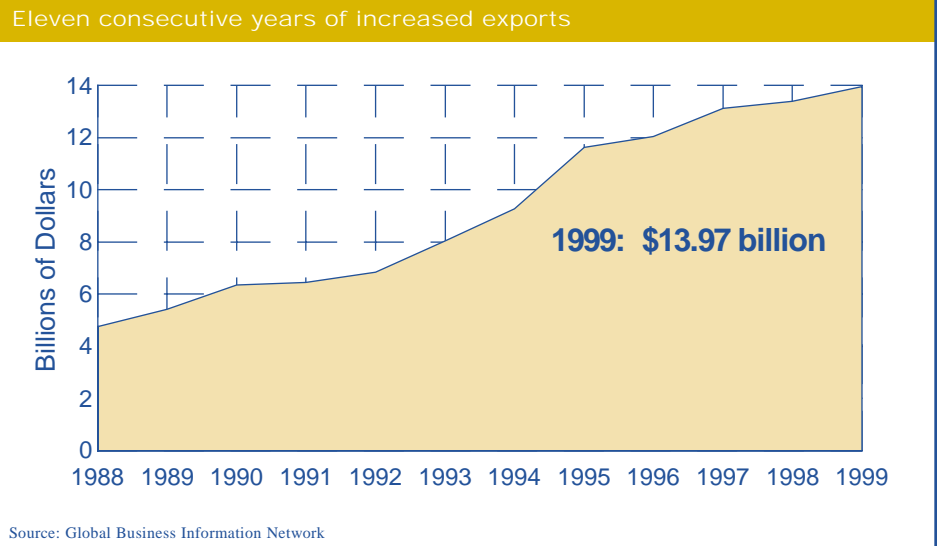
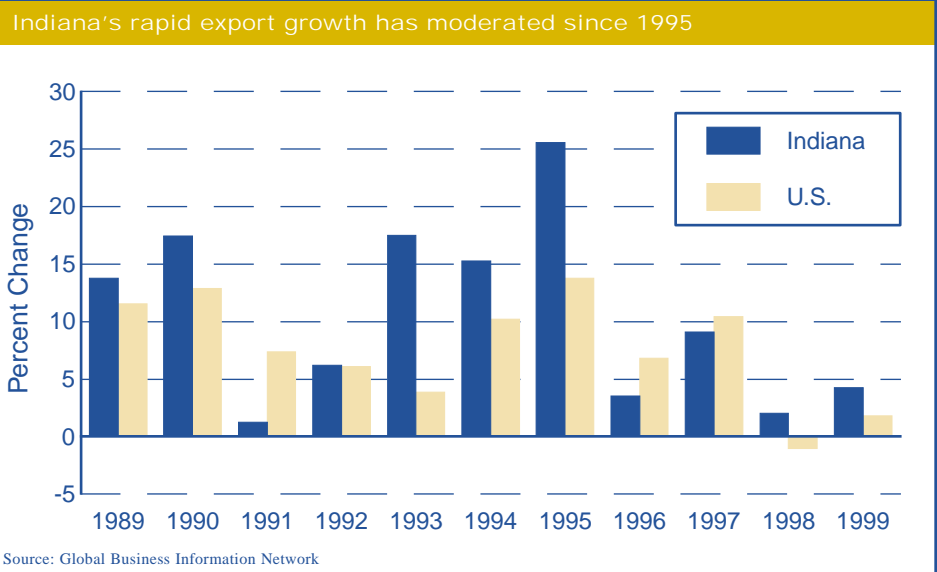


Figure 2: Growth in Exports, Annual Percent Change



in other states and then exported from there, that means some of Indiana's domestic shipments become the export sales of other states.

Transportation equipment is the largest export industry in Indiana (see Figure 4). Transportation equipment exports have grown an average of 29% per year since 1988. The other top export industries in 1999 were

industrial machinery and computer equipment; chemicals; electronic equipment; and sophisticated instruments. Together these five industries accounted for 75% of all export sales from Indiana.

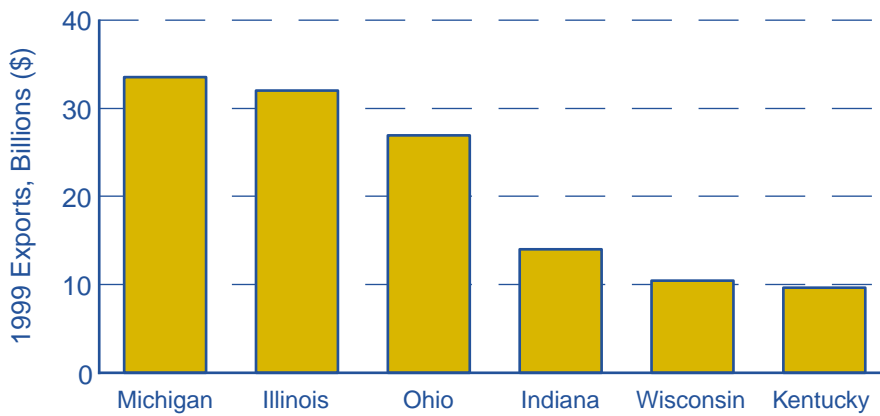
Among the major export sectors, Indiana's fabricated metals industry turned in the highest growth rate, averaging 44% per year since 1988.

Exports from the sophisticated instruments industry expanded at a 32% annual rate, while rubber and plastics products exports climbed 24% per year.

Indiana firms ship to destinations all over the world, but more than half of all Indiana exports go to Canada. Six countries receive 77% of Indiana exports (see Table 1). Exports to Canada have quadrupled since 1988; exports to Mexico have shot up even faster. In 1999 Indiana's exports to Mexico were five times greater than they were in 1988.

Figure 3: 1999 Export Sales, in Billions of Dollars

Michigan leads region, although its export growth has slowed



Source: Global Business Information Network

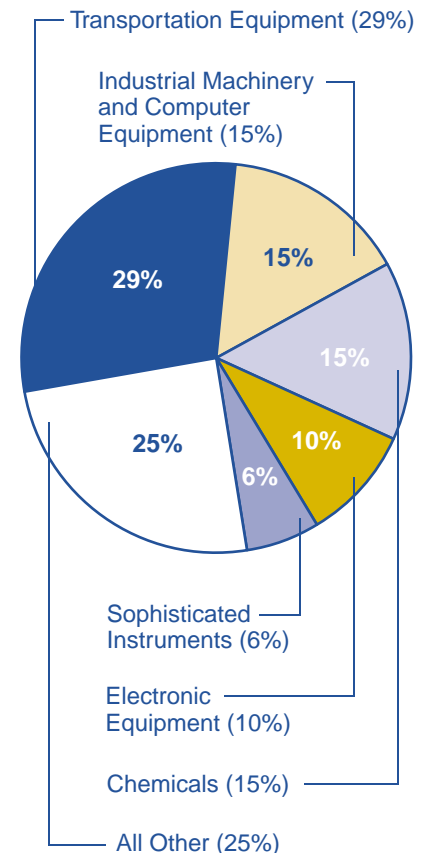
Table 1: 1999 Indiana Export Destinations

Destination	1999 Indiana Exports (\$ Million)	Percent of 1999 Indiana Exports	Percent change from 1998
Canada	7,447	53%	14.5%
United Kingdom	886	6%	-4.2%
Mexico	812	6%	9.4%
Japan	758	5%	-23.7%
France	433	3%	18.3%
Germany	411	3%	-11.2%
Netherlands	280	2%	-4.1%
Brazil	250	2%	-2.2%
Rest of World	2,692	19%	-6.0%
<b>Total</b>	<b>13,970</b>	<b>100%</b>	<b>4.2%</b>

Source: Global Business Information Network

Figure 4: Indiana Exports, 1999

Five industries dominate exports



Source: Global Business Information Network

## Which Industries Are Growing in Indiana?

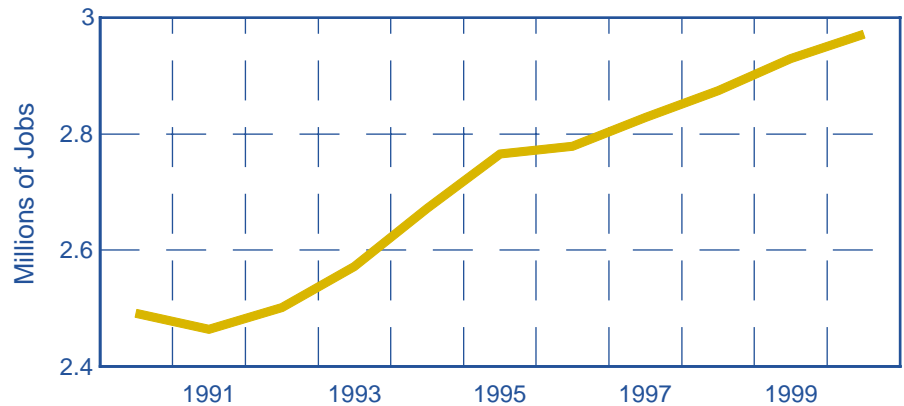
Total employment in Indiana, compared to a year earlier, was up 1.4% in March (see Figure 1). Nationally, the increase was 2.3%. Although the figures for March are preliminary, it seems safe to say that the state has added more than 40,000 jobs for the fourth consecutive year (see Figure 2).

Which industries are growing depends on how we measure growth and how we define industries. For example, between March 1999 and the same month in 2000, service-producing activities added 36,300 jobs in Indiana, compared to only 5,200 for goods-producing activities. But if we go to a finer level of detail, then the

If we look at change in share of total state employment, small but fast-growing sectors do not dominate. Jobs in transportation equipment showed the largest increase in share.

Figure 1: Total Nonfarm Employment, Indiana, March 1990 to 2000

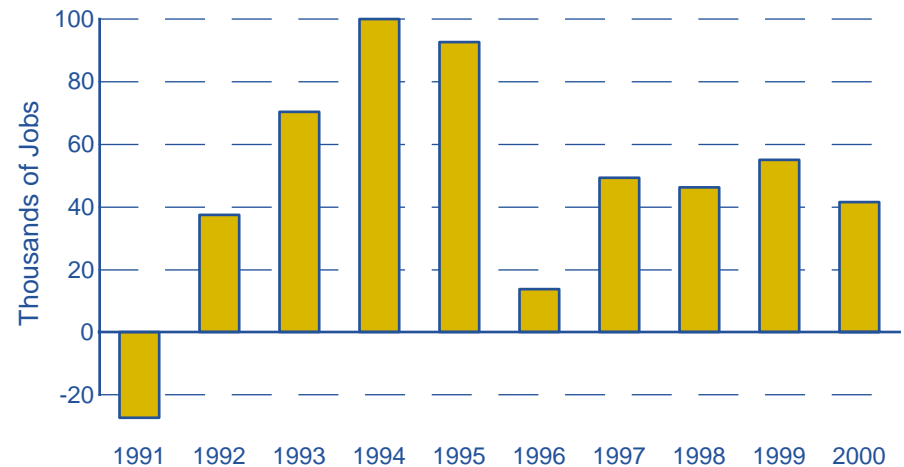
Employment continues to rise for ninth consecutive year



Source: Indiana Department of Workforce Development

Figure 2: Year-to-Year Change in Indiana Employment, March 1991 to 2000

Gains exceed 40,000 for fourth consecutive year



Source: Indiana Department of Workforce Development

most jobs were added by a manufacturing industry, transportation equipment, which grew by 5,500.

While it is appropriate to measure growth by absolute magnitudes (number of jobs added) or by percent change, a third way may be more telling. If we look at the change in share of total employment, a somewhat different picture emerges. Small but fast-growing sectors are not over-represented by their percent change, and large sectors with slow growth do not dominate the presentation.

Table 1 shows the ordering of industries by change in share of total employment. Building material dealers had a 7.7% increase in employment, but they do not lead the list because their total jobs added is smaller than other sectors. Yet number of jobs added alone does not determine the ranking (as seen by legal services). It is the composite effect on employment share that rules this ordering and prevents being blinded by either swift growth among smaller entities or lumbering growth by large entities.

Indiana's growth leaders are not necessarily those of the nation as a whole. Likewise, the fastest-growing national industries have not fared consistently well in the Hoosier state. In fact, it is unlikely that any state economy will exactly mirror the national economy because industries tend to cluster geographically rather than spreading themselves evenly across the country.

Table 1: Impact Leaders  
Greatest change in share of total state employment, March 1999-2000

Industry	Jobs Added	Percent Change	Change in Share
Transportation Equipment (SIC 37)	5,500	4.4	0.125
Business Services (SIC 73)	5,200	3.6	0.106
Wholesale Trade—Durable Goods (SIC 50)	3,600	3.8	0.076
Educational Services (SIC 82)	2,600	5.2	0.064
Building Materials, Hardware, Garden Supply & Mobile Home Dealers (SIC 52)	2,000	7.7	0.055
Auto Dealers & Gasoline Service Stations (SIC 55)	2,500	4.0	0.055
Social Services (SIC 83)	2,000	4.0	0.043
Lumber & Wood Products Exc. Furniture (SIC 24)	1,300	4.2	0.029
Real Estate (SIC 65)	1,200	4.5	0.028
Home Furniture, Furnishings & Equipment Stores (SIC 57)	1,100	5.1	0.027
Rubber & Misc. Plastics Products (SIC 30)	1,500	2.7	0.024
Amusement & Recreation Services (SIC 79)	1,100	3.2	0.021
Engineering, Accounting, Research, Management & Related Services (SIC 87)	1,100	2.8	0.018
Legal Services (SIC 81)	700	5.5	0.017
Wholesale Trade—Nondurable Goods (SIC 51)	1,100	2.3	0.015
Health Services (SIC 80)	3,600	1.6	0.014

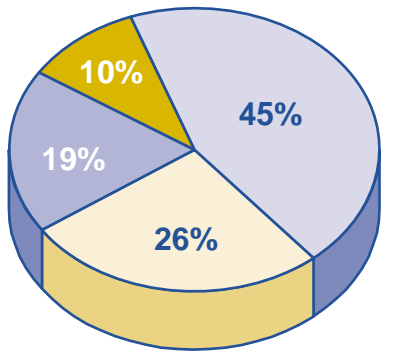
Source: Indiana Department of Workforce Development

## Exporting Industries: Employment and Wage Trends

Indiana's top four export industries — transportation equipment, chemicals, machinery and electronics — together accounted for 10% of the state's employment and almost 16% of the state's wages, according to covered employment and wage data for second quarter 1999. (For details on exports by industry, see "IN the Spotlight" on page 2.)

Figure 1: Top Four Export Industries

Top four employment distribution



- Transportation Equipment (45%)
- Industrial Machinery and Computer Equipment (26%)
- Electronic and Electrical Equipment (19%)
- Chemicals (10%)

Source: Indiana Department of Workforce Development

### Higher Wages Across the Board

Average weekly wages for the four export industries were all higher than the overall average weekly wage of \$559 for the state. The highest average weekly wage, \$1,330 per week, was in the chemicals industry. This wage is 2.4 times the state average. Together, the four top exporting industries paid, on average, \$885 per week, one and a half times greater than the state average.

Each of the four largest export industries paid higher wages in 1999 than in 1989. In average weekly wages, the greatest increase was in the

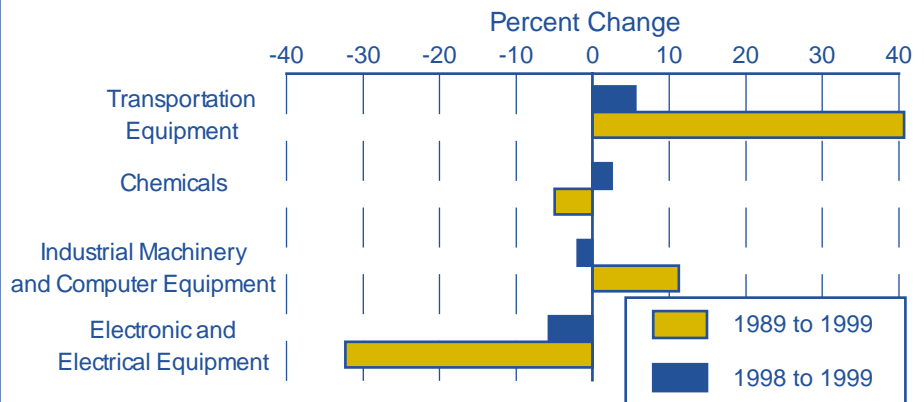
chemical industry (84%), followed by transportation equipment (44%), industrial machinery (34%) and electronics (32%).

### Employment Changes Unique for Each Industry

While each of the top export industries show wage increases, changes in employment vary according to the industry. Figure 1 shows the contribution to total employment by each of the four industries in second quarter 1999. Looking at changes in employment in the most recent year and in the past 10 years for the four

Figure 2: Percentage Employment Change in Export Industries

Transportation equipment leads the way



Source: Indiana Department of Workforce Development

Table 1: Indiana's Top Four Export Industries, Second Quarter 1999

Industries	Establishments	Employment	Quarterly Wages	Average Weekly Wage
Transportation Equipment	562	127,593	\$1,499,479,924	\$904.00
Industrial and Commercial Machinery	1,849	75,989	\$756,322,413	\$765.62
Electronic and Electrical Equipment	390	54,118	\$540,462,872	\$768.21
Chemicals	260	29,394	\$508,243,908	\$1,330.06
Industry Totals	3,061	287,094	\$3,304,509,117	\$885.40
<b>State Totals</b>	<b>138,220</b>	<b>2,923,692</b>	<b>\$21,243,994,897</b>	<b>\$558.93</b>

Source: Indiana Department of Workforce Development

industries reveals four different scenarios. Figure 2 shows the percent change in employment for each of the four sectors, from second quarter 1998 to second quarter 1999, and from second quarter 1989 to second quarter 1999.

Motor vehicles and equipment account for the largest portion of employment in the state's **transportation equipment** industry. Employment in this industry grew from 90,700 in 1989 to 120,800 in 1998. In the last year covered by the data, an additional 6,800 jobs were created within the industry. The net increase over 10 years has been 36,900 jobs, with 18% of the increase occurring in the most recent year. The addition of the Toyota plant in Princeton and the Chrysler expansions have contributed to employment growth in this sector.

Pharmaceutical preparations account for the largest portion of employment in the **chemicals** industry in the state. The chemicals industry has seen a decrease in employment in the past 10 years, but employment grew by 700 in the most recent year. Employment growth in this industry is expected as Eli Lilly continues its expansion.

The **industrial and commercial machinery** industry includes industrial machinery, metalworking machinery, and engines and turbines. The last year saw a decline in employment of 1,500

jobs. However, including last year, net employment in this industry increased by 7,700 over 10 years.

The **electronic and electrical equipment** industry includes electronic components and accessories,

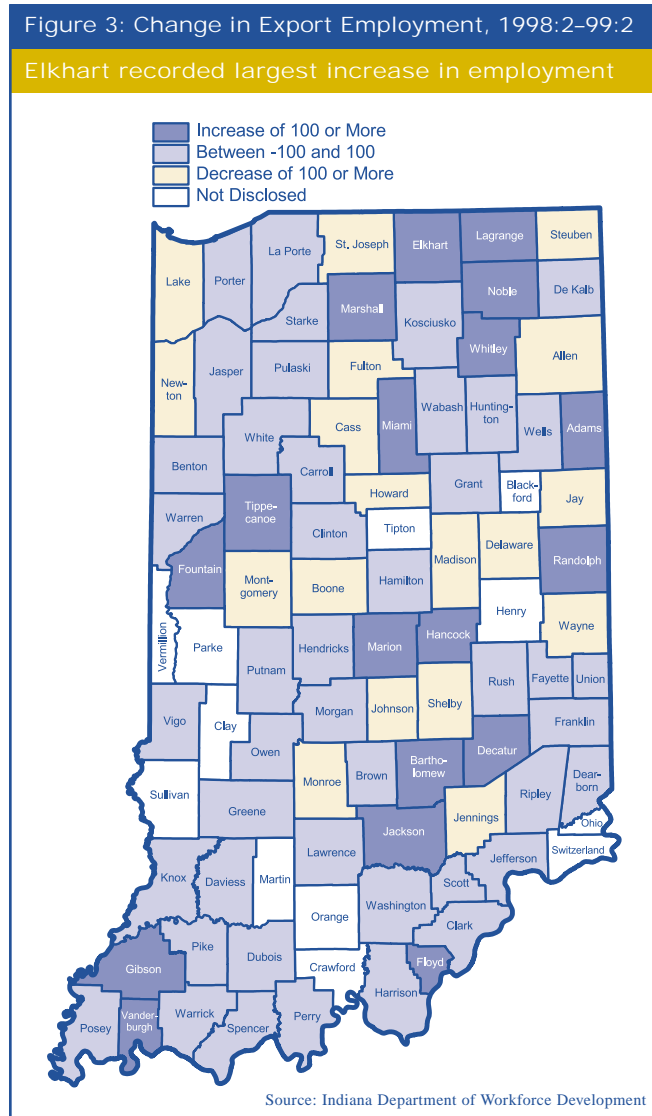
manufacturing plants including GE and Thomson Consumer Electronics have contributed to employment decline in this sector.

Figure 3 shows the change in combined employment for the four

export industries between second quarter 1998 and second quarter 1999, by county. Elkhart County recorded the largest increase in employment (2,588), followed by Gibson (861), Marshall (695), Decatur (657) and Tippecanoe (643). Counties recording the largest decreases in employment were Madison (742), Delaware (703), St. Joseph (701), Shelby (604) and Allen (524).

Overall, the comparison of export and employment data shows how complex the Indiana and global economy have become. In today's economy, a shrinking industry in terms of employment may in fact be expanding in terms of exports that add wealth to the Indiana economy.

*Technical Note: Employment change in some sectors is due in part to reclassification of certain types of establishments. In electronics, for example, establishments with more than 5,000 jobs were shifted from the electronics to the transportation equipment classification. Similarly, in 1999 at least one major employer was shifted from industrial machinery to primary metals.*



electric lighting and wiring equipment, household appliances, and household audio and video equipment. Employment declined by 32% from 80,000 in 1989 to 54,100 in 1999. Employment declined by 3,300 in the most recent year. Downsizing and closures of

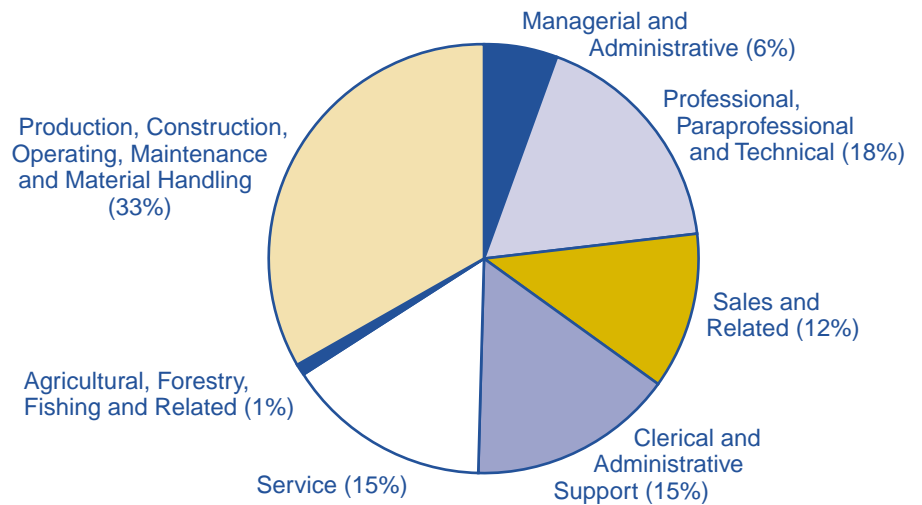
## Occupational Data: A Different Perspective on the Economy

**H**ow many lawyers are employed in Indiana? How many people are employed in high-tech jobs? What percentage of Indiana workers work in high- or middle-wage occupations? These are

just a few of the questions that can be answered using occupational data collected by the Indiana Department of Workforce Development (IDWD) for the U.S. Bureau of Labor Statistics (BLS). IDWD collects occupational

Figure 1: Employment by Major Occupational Groups, Indiana, 1998

Hoosiers are employed in 711 occupations

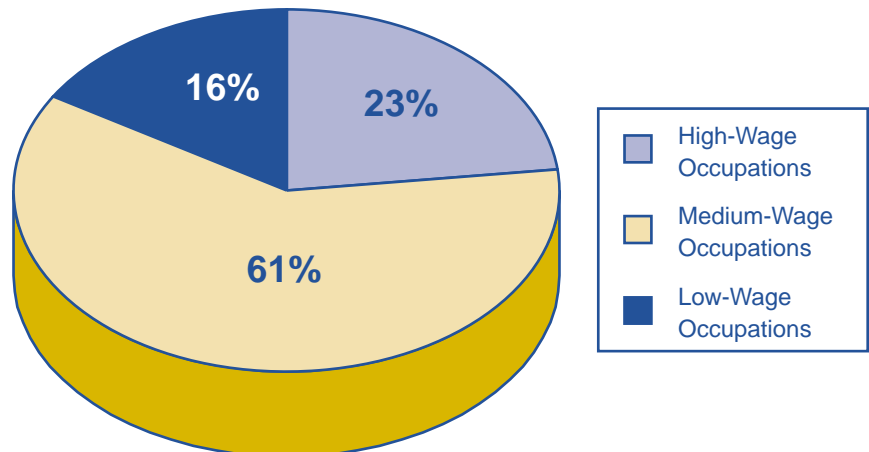


Source: U.S. Bureau of Labor Statistics

High-tech occupations are held by more than 44,000 workers and make up 2% of the Hoosier workforce.

Figure 2: Occupations by Wage Group, Indiana, 1998

Twenty-three percent of Hoosier jobs are high-wage



Source: U.S. Bureau of Labor Statistics



data through four different surveys: the Occupational Employment Survey (OES), the Current Population Survey's March Supplement, the Employment Cost Index and the National Compensation Survey.

According to OES data for 1998, Indiana has 2.9 million workers employed in 711 occupations, with a weighted average annual wage of roughly \$27,682. The largest major category of occupations, titled Production, Construction, Operating, Maintenance and Material Handlers, includes 955,540 workers or 33.3% of the total workforce (see Figure 1). Within this category, the top five occupations include fabricators, assemblers, truck drivers, laborers and repair personnel. All of these workers, plus those categorized under Clerical/Administrative Support and Sales/Sales Related, are employed in "middle-wage occupations," earning a

weighted average of \$25,218 per year in 1998 (see Table 1). Together, these middle-wage jobs make up 61% of Indiana's workforce.

Twenty-three percent of Hoosiers work in high-wage occupations and 16% work in low-wage occupations (see Figure 2). Of all Indiana workers, 5.5% work in managerial or administrative occupations and 17.6% work in professional/technical positions, both considered high-wage occupational groups. The average annual salary for high-wage occupations in Indiana is approximately \$42,009.

The top 50 occupations make up more than 50% of the total workforce. Twenty-three percent of these occupations have wages above the state average of \$27,682 per year. In fact, the fifth-largest occupation — and the highest paid — in Indiana is general managers and top executives earning on average \$63,000 per year.

As for lawyers in Indiana, there were 4,650 in 1998 earning an average wage of \$61,000 per year. They make up 0.2% of the total workforce. High-tech occupations, on the other hand, are held by more than 44,000 workers and make up 2% of the workforce.

Clearly, occupational data present an opportunity to view Indiana's economy from a different perspective. However, to see a more complete picture of jobs in Indiana and where they fall within the larger economic structure of the state, occupational data should be combined with industry data on employment. This challenge will have to wait for a future issue of *IN Context*.

Table 1: Employment and Wages by Occupation, 1998

Occupation	Employment	Weighted Average Annual Wage	Percent of Total	
			Employment	Wages
Managerial and Administrative	158,860	\$54,065	5.50%	195%
Professional, Paraprofessional and Technical	505,433	\$38,220	17.60%	138%
Sales and Related	338,800	\$23,557	11.80%	85%
Clerical and Administrative Support	445,200	\$21,904	15.50%	79%
Service	444,721	\$16,399	15.50%	59%
Agricultural, Forestry, Fishing and Related	23,811	\$18,665	0.80%	67%
Production, Construction, Operating, Maintenance and Material Handling	955,550	\$27,352	33.30%	99%
High-Wage Occupations	664,293	\$42,009	23.10%	152%
Medium-Wage Occupations	1,739,550	\$25,218	60.60%	91%
Low-Wage Occupations	468,532	\$16,514	16.30%	60%
<b>TOTAL</b>	<b>2,872,375</b>	<b>\$27,682</b>		

Source: U.S. Bureau of Labor Statistics

## Hoosier Births Stage a Comeback

**B**irths in Indiana are on the rise according to data recently released by the Indiana State Department of Health for 1998, the latest year for which data are available. Indiana births in 1998 reached 85,055, the highest total since 1991. The 1998 total was 2% higher than 1997 and represents the largest annual increase in either absolute or percentage terms reported to this point in the 1990s.

Figure 1 shows birth trends for Indiana and the United States from 1960, the tail end of the baby boom, through 1998. While the scale of each axis is necessarily different, the trend is evident. The boom is generally acknowledged to have ended in 1964, after which U.S. births fell below 4 million and Indiana births dropped below 100,000.

For both the state and the nation, births reached a 40-year low in the mid-1970s, a period some social scientists have dubbed the “birth dearth.” The stork’s deliveries picked up from that point, but the action has been much hotter at the national level than in Indiana. The dearth was followed, beginning around 1980, by the “echo boom,” a notable increase in births attributed to the vast cohort of boomers having their own children. The impact of the echo boom in Indiana has been minimal, however. Hoosier births have not yet returned to the 1980 level. In the United States, births have run higher than the national 1980 tally for 18 years running. U.S. births even returned to baby-boom heights, exceeding 4 million from 1989 to 1993. The peak year for Indiana’s echo boom was 1990, with almost 86,000 births, well

below the baby-boom levels. Indiana’s flatter birth trend over the past 20 years is probably due to the net outflow of young adults from the state in the early part of the 1980s.

Figure 2 depicts the changing racial composition of births in the state throughout the 20th century. Because detailed race categories were not recorded on birth certificates for much of the century, long-range historical analysis is limited to two categories:

white and nonwhite (recorded as race of the mother). While nonwhite births remain a fairly small proportion of all Indiana births, the number and share are growing. As shown in Figure 2, white births peaked in the 1950s and have declined since then. Nonwhite births, in contrast, have continued a gradual increase over the century, climbing to 12% of all Indiana births in the 1990–98 period from 2% in the 1900–09 decade.

Figure 1: Births in Indiana and the United States: 1960–98

Birth trends for Indiana and the United States diverged after 1980

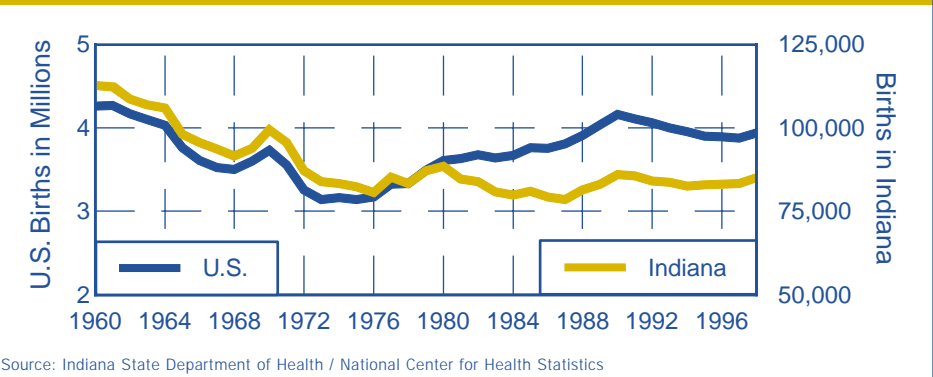
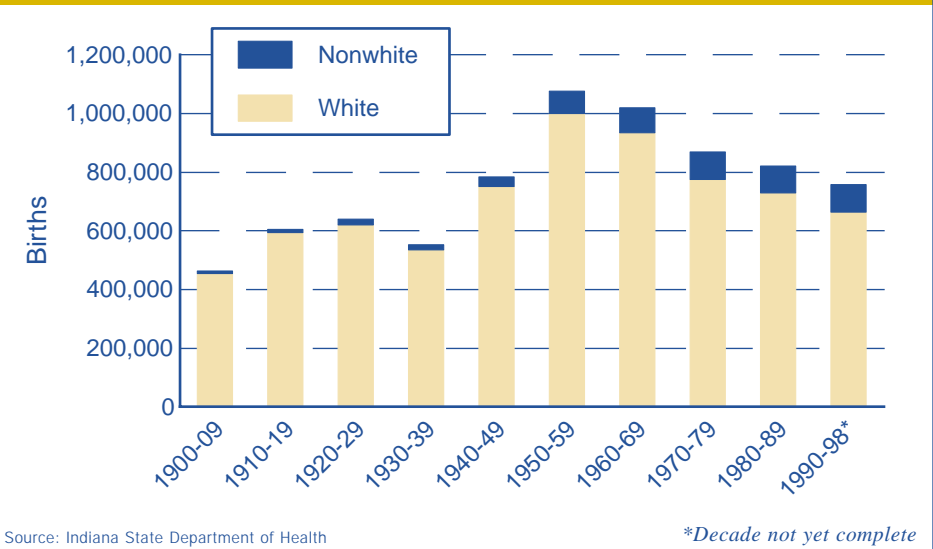


Figure 2: Indiana Resident Births by Race (White/Nonwhite): 1900–98

Nonwhite births grew from 2% of total births (1900–09) to 12% (1990–98)



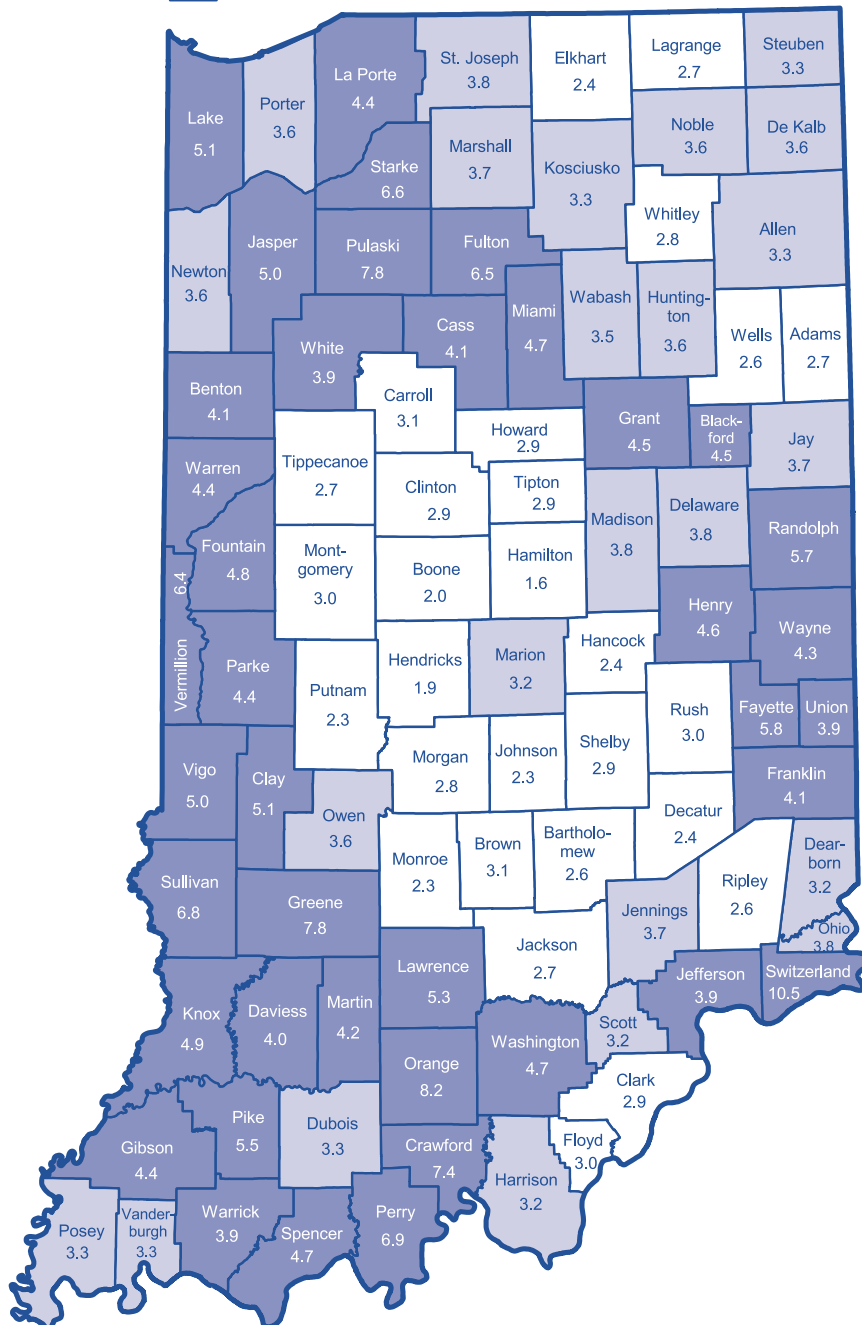
# County Unemployment Rates Continue to Cover Wide Range

Figure 1: March Unemployment Rates by County

The national unemployment rate for March was 4.3%

State Unemployment Rate = 3.5

- Above State Rate
- Approx. Equal to State Rate (+/- .3)
- Below State Rate



Source: Indiana Department of Workforce Development

Indiana's statewide unemployment rate has been declining slowly for several years. For all of 1999, the average rate for the state was 3.0%, while the national average was 4.2%. Certain counties, though, have had unemployment rates persistently above the state average. In other counties, the rate has long been below the state average.

The tables below show those counties with the highest and the lowest average rates, respectively, from 1996 through March 2000.

### Highest Unemployment Rates from 1996 through March 2000

County	Average Rate
Orange	7.7%
Randolph	7.4%
Crawford	7.3%
Greene	7.0%

### Lowest Unemployment Rates from 1996 through March 2000

County	Average Rate
Hamilton	1.4%
Hendricks	1.7%
Boone	1.9%
Johnson	2.1%

# INCONTEXT

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## Outlook

*(continued from page 1)*

opportunities may be coming from next," said Carlos Barbera, director of the International Trade Division of the Indiana Department of Commerce.

"One of the advantages of operating in the global marketplace is that business can take advantage of these economic ups and downs to explore new markets and balance out fluctuations in sales."

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## Resources:

- The International Trade Division of the Indiana Department of Commerce provides technical assistance

through the Indianapolis office and 12 international offices. Financial assistance to attend international trade shows is also available (<http://www.state.in.us/doc/trade/index.html> or call (317) 233-3762).

- The Global Business Information Network provides business assistance, international workshops and seminars, and export research (<http://www.gbin.org> or call (812) 855-5463).

- The *Indiana Export Report* prepared by Davidson and his staff is available at no cost from the Indiana Department of Commerce, International Trade Division at (317) 232-4949.

## IN Depth:

For all the latest state and county figures and complete time series data sets related to the Indiana economy, visit the following Internet sites:

- [www.ibrc.indiana.edu/incontext](http://www.ibrc.indiana.edu/incontext)
- [www.stats.indiana.edu](http://www.stats.indiana.edu)
- [www.indianacommerce.com](http://www.indianacommerce.com)
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