

IN the Spotlight:

If the Future is Here, Where is Indiana? Part II: Indiana Businesses

As the leading manufacturing state in the United States, Indiana has a rich legacy of Old Economy companies. These Old Economy businesses are adapting to New Economy technologies at varying rates. This article reviews key findings from interviews that assessed the patterns of computer and Internet technology adoption in Indiana. Performed as part of *Indiana*

Interconnect, the surveys focused particular attention (through survey over-sampling) on four different industry sectors: agriculture, distribution/logistics, life sciences and manufacturing. The latter three have been identified as key technology clusters for Indiana. Information technology, the fourth key technology cluster, was not over-sampled because it is assumed that companies self-identified as IT are, by their nature, technology adopters.

Overall, the geographic location of companies did not have a significant influence on the technology adoption profile of companies surveyed. (In contrast, a companion survey of individuals in Indiana households showed a strong regional component to computer and Internet use patterns, as addressed in the May-June 2003 issue of *IN Context*). However, company size and industry sector were significant determinants of technology penetration, levels of sophistication, performance expectations and dependence. Results from the study also validated the 2002 report by the Progressive Policy Institute (PPI) that ranked Indiana fourth in the U.S. for online manufacturing but 38th for online agriculture. The PPI study did not rank the other industry sectors.

(continued on page 2)

Survey Specs

Surveys were conducted over the telephone using a random selection of telephone numbers prepared by Survey Sampling, Inc. The sample size of 384 interviews per Indiana



region (see map) provided a margin of error of plus or minus five percentage points at the 95 percent confidence level.

Additional interviews were completed in each of four industry sectors

(agriculture, distribution/logistics, life sciences and manufacturing) to achieve samples of either 340 or 384 surveys for each industry.

IBRC staff assisted in providing the list of NAICS codes to define each industry. A total of 2,251 companies were interviewed by Stone Research Services (www.stoneresearchservices.com).

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Unemployment Rates for May 2003

Indiana
4.8%

United States
5.8%

*Not seasonally adjusted

IN the Spotlight

(continued from page 1)

Do You Have Access to a Computer?

When compared to responses obtained by the Technology Policy Group in a study of the U.S. and Ohio, business use of computers was more widespread in Indiana than in the U.S. or in Ohio in 2002 (see Figure 1), with the exception of agricultural enterprises. Only 46 percent of agricultural companies interviewed used computers. By contrast, computer use among other sectors was widespread, with penetration between 80 percent and 88 percent. Company size is a good predictor of technology adoption, with three-fourths of small companies (25 employees or less) using computers compared to at least 94 percent for larger companies. However, not all employees use a computer at work. Of businesses using computers, the majority of employees

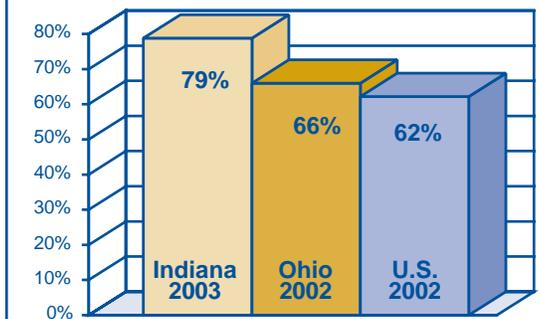
use computers at work in 35 percent of the agricultural companies, 39 percent of distribution/logistics companies, 39 percent of manufacturing companies and 59 percent of life sciences companies.

According to responses from companies that use Internet and computer technology, most employees

Company size is a good predictor of technology adoption.

Figure 1: Computer Use in Businesses

Most Indiana companies use computers



Source: Stone Research Services and Technology Policy Group

depend on peer training on the job to learn technology skills, as indicated in Figure 2. This underscores the importance of recent work-skill gap analyses and state grants that support technology training. More information on the Skills 2016 program can be found at www.in.gov/doc/skills2016.

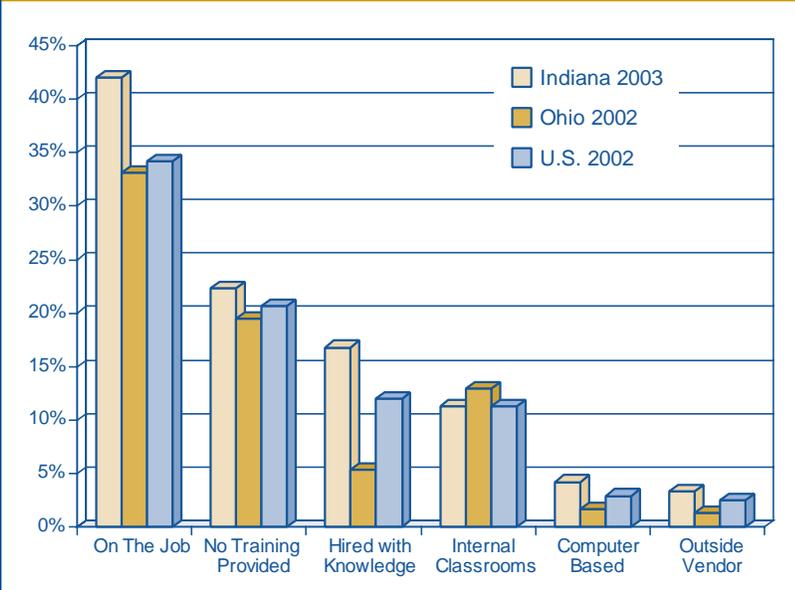
What Information and Internet Technology Do You Use?

Manufacturing companies were the heaviest users of e-mail for both internal and external communications (84 percent), exceeding the 73 percent use displayed by other sectors. Figure 3 displays the types of technology use by businesses according to industry sector.

Indiana manufacturing companies were much more likely to use company websites than those in other sectors: 53 percent compared to only 33 percent for life sciences companies and 10 percent for agricultural enterprises. This illustrates how industry sector plays a key role in determining the pattern of technology used. According to the Indiana

Figure 2: Internet and Technology Training in Companies

Most workers learn technology skills on the job



Source: Stone Research Services and Technology Policy Group

companies interviewed that have their own websites, 83 percent said their competitors also have websites.

In addition to keeping up with competitors, the primary reasons cited for developing a website by at least two-thirds of respondents were customer service and business expansion. A more granular analysis of the survey data revealed that 73 percent of manufacturing companies use their websites to provide product specifications and information. This differs markedly from other sectors and indicates a heavier dependence on the company website as a critical business operation. It also reflects the trend among manufacturing companies to publish catalogs and manuals online. Automotive mechanics, for example, go to manufacturer websites for assistance with diagnostics, part identification and ordering. This

Manufacturers are most likely to have company websites.

paperless approach also drives demand for broadband access in order to use the mechanic's time efficiently.

Companies in the distribution/logistics sector tend to use technology effectively for sales and marketing. Based on their extensive use of company websites, 20 percent of manufacturing and distribution/logistics companies anticipate increased future revenue due to Internet use. Among survey respondents from manufacturing companies, 28 percent attribute increased overall revenue to Internet

use, slightly higher than average for Indiana companies (20 percent).

Overall, Indiana companies recognize only a small percentage of their revenue from the Internet. Respondents from manufacturing companies quoted the highest Internet revenue: 39 percent attributed up to 25 percent of revenue to the Internet. On the other hand, increased productivity was observed, particularly in distribution/logistics, manufacturing and other sectors (see Figure 4). Enhanced communications, expanded access to information and more efficient business operations were the areas cited for increased productivity.

How Do You Access the Internet?

The preferred method of Internet access is largely a function of company size and sector. Agricultural

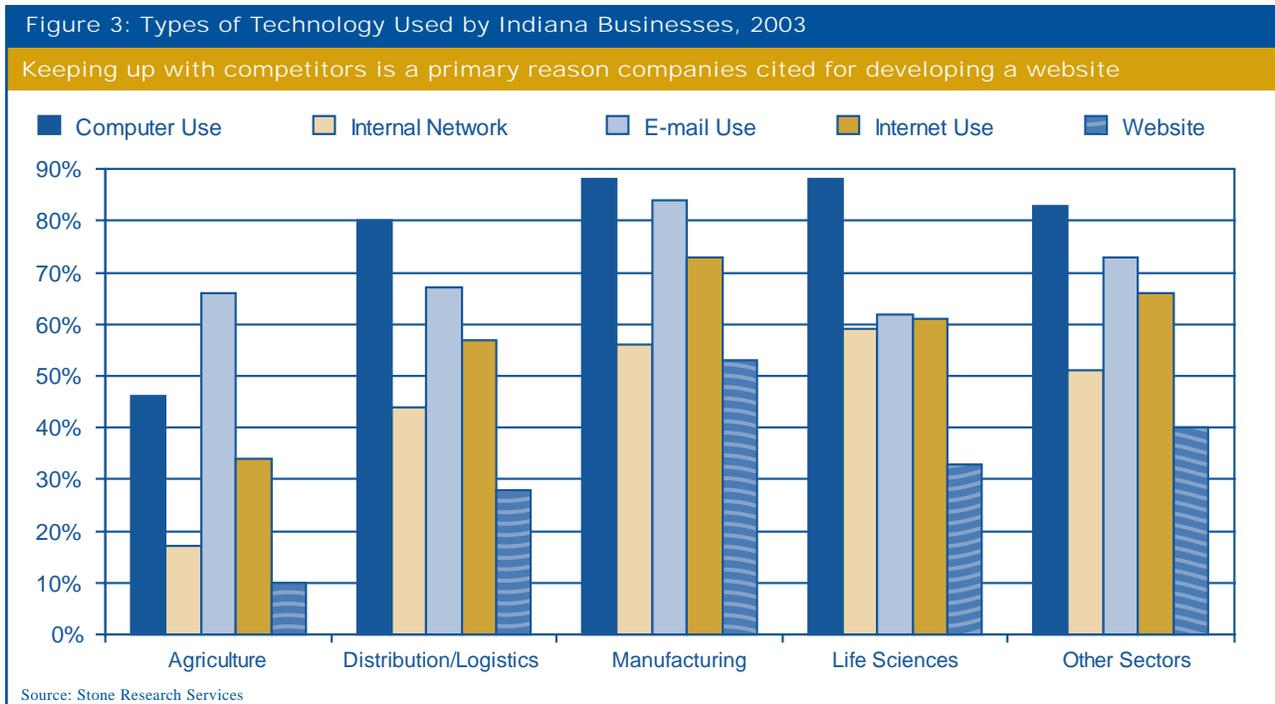
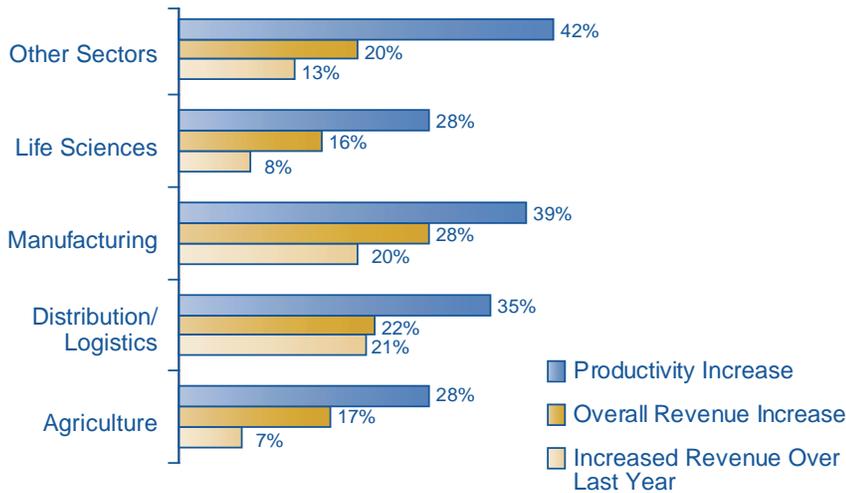


Figure 4: Increased Company Performance Attributed to Internet Use, 2003

Productivity improvements are seen in all industries



Source: Stone Research Services

companies are by far the most likely to use dial-up connections at 82 percent (see Table 1). Larger non-agricultural operations strongly favor dedicated circuits (ISDN or T1). Telephone modems account for more than half of business Internet connections, averaging 53 percent for the state. A geographic look shows that broadband connections (over DSL, T1 lines or cable modems) are more widespread in the central region (38 percent) than in the North (31 percent) or South (30 percent). Higher speed access is also demanded by companies with websites; only 39 percent of those with websites access the Internet via dial-up connections, as compared to 69 percent for other companies.

Conclusions

Computer and Internet technology is significantly more prevalent among non-agricultural companies that employ more than 25 people. And

while the majority of Indiana businesses own computers, the majority of employees do not have access to them and will not receive training from their company to use them. On the other hand, manufacturing companies, especially larger ones, are aggressively adopting Internet technology. Along with the distribution/logistics sector, manufacturing leads the state in website use. More sophisticated use of

the Internet has resulted in increased revenue, improved productivity and a greater demand for broadband performance.

But smaller firms have not benefited from technology adoption to the same extent, even though their payoff is likely to be significant.

In the late 1990s, websites were widely touted for their potential to level the playing field, giving a small company the same global access as a large one. For Indiana, however, survey results indicate a growing division between small businesses and larger ones. The New Economy is advertised as benefiting the agile. Indiana's small businesses must discover that agility.

Jennifer Kurtz, eCommerce Director, Indiana Department of Commerce

For More Details

Learn more about *Indiana Interconnect*
www.indianainterconnect.com

Table 1: How Indiana Companies Access the Internet, 2003

	Agriculture	Distribution/Logistics	Manufacturing	Life Sciences	Other Sectors
Telephone modem	82%	54%	46%	45%	54%
DSL	2%	12%	18%	17%	15%
T1 or direct connection	3%	14%	16%	16%	13%
Cable modem	7%	10%	9%	12%	9%
Other/don't know	6%	10%	11%	10%	9%

Source: Stone Research Services

Study Finds Nonprofit Sector is a Major Economic Force for Indiana

Nonprofit organizations contribute to the quality of life for all Indiana citizens by offering health care, education, job training, nursing home care, arts and culture and opportunities for democratic participation. What is not widely appreciated, however, is that nonprofit organizations are also a major force in the state's economy and in the state's regional economies.

A report just released by the Center on Philanthropy and the School of Public and Environmental Affairs at Indiana University, in cooperation with the John Hopkins Nonprofit Employment Data Project, presents new information on the size, composition and distribution of paid employment in the private nonprofit sector in Indiana for 1995, 2000 and 2001.

This report is part of a larger project, *Indiana Nonprofits: Scope and Community Dimensions*, currently underway at Indiana University

designed to provide solid, baseline information about the Indiana nonprofit sector, its composition and structure, its contributions to Indiana, the challenges it is facing, and how these features vary across Indiana communities.

The following summary provides a glimpse at the data, which will receive detailed coverage in the summer issue of the *Indiana Business Review*.

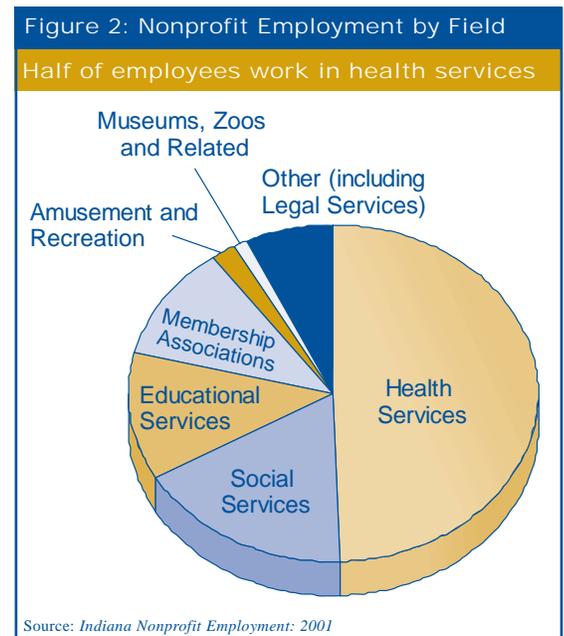
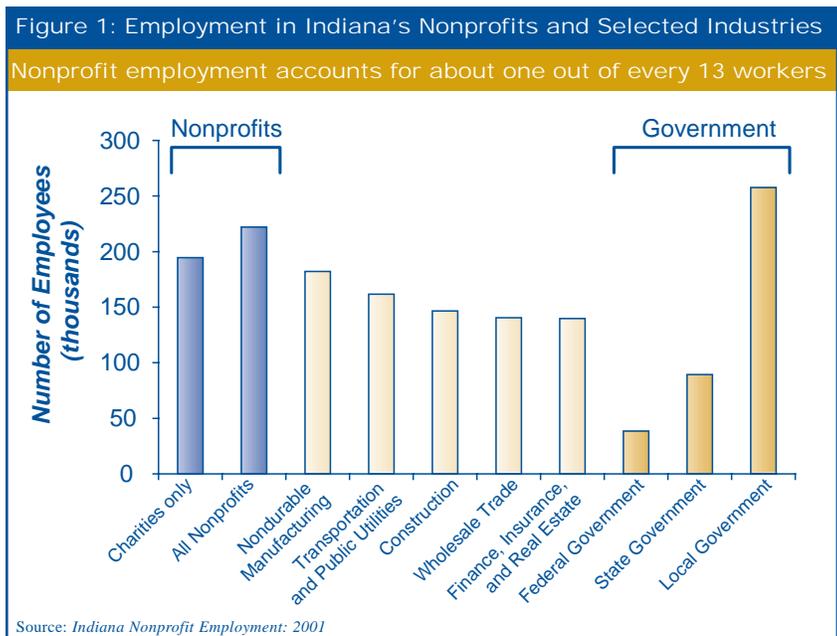
Key Findings

- The nonprofit sector is a significant economic force in Indiana, accounting for nearly one out of every 13 paid workers. This is more than those employed in the state's non-durable manufacturing industry, and about one-third more than those employed in construction (see Figure 1).
- The 222,000 nonprofit employees in Indiana earned about \$6 billion in wages in 2001.

- Nonprofit employment is not restricted to any one region of Indiana, but is distributed broadly throughout the state.
- About half (49 percent) of nonprofit employment in the state is in health services, with another 17 percent in social services and 12 percent in education (see Figure 2).
- Most (88 percent) nonprofit employees work for charities, although only 55 percent of nonprofit employers are charities.

Kirsten A. Grønberg, Efrogmson Chair in Philanthropy, Center on Philanthropy, and Professor of Public and Environmental Affairs, School of Public and Environmental Affairs, Indiana University, and Hun Myoung Park, Research Associate.

For More Details
Learn more about the study at www.indiana.edu/~nonprof



A New Metro Landscape for Indiana

Indiana is sporting a new look for its metropolitan areas, as newly defined by the federal government in June 2003. What does it look like, and what does it all mean? We can answer the first with maps and descriptions, but it is too early to know what the full impact of these newly defined areas will mean for Indiana.

Statistical groupings of counties were first federally defined in the 1950s, with six Standard Metropolitan Statistical Areas (SMSA) for Indiana. Through the decades, as Indiana's

population became increasingly urban, the numbers of those areas grew so that by the 1990s there were 11 metro areas.

With the latest configuration of statistical areas, the majority of Indiana counties are in either a metropolitan statistical area (metro) or a micropolitan statistical area (micro), with more than 5.7 million Hoosiers living in these areas.

Thirteen Metropolitan Statistical Areas

These include the two newly defined metropolitan statistical areas of Michigan City (La Porte County) and Columbus (Bartholomew County). The definition of a metropolitan statistical area requires an urbanized area with a population of 50,000 or more and adjacent territory with a significant degree of social and economic integration as measured by commuting. While 13 metropolitan areas have principle cities within state lines, three additional metro areas contain Indiana counties (see Figure 1). More than 4.7 million people live in Indiana's metropolitan counties.

Twenty-Five Micropolitan Statistical Areas

These are a new set of statistical areas, defined as having at least one urban

cluster with a population of at least 10,000 but less than 50,000 (see Figure 2). The urban clusters also have adjacent territory with a high degree of social and economic integration as measured by commuting. More than 1 million people in Indiana live in these micropolitan areas.

One Metropolitan Division

A metropolitan statistical area containing a single core with a population of 2.5 million or more may be subdivided to form smaller groupings of counties referred to as metropolitan divisions.

Gary is now labeled as a metropolitan division (Lake, Porter, Newton and Jasper counties) of the Chicago-Naperville-Joliet Metropolitan Statistical Area (see Figure 3). More than 680,000 people live in the Gary division of the Chicago metro area.

Four Combined Statistical Areas

If specified criteria are met, adjacent metropolitan and micropolitan statistical areas, in various combinations, may become the components of a new set of areas called combined statistical areas (CSAs). For instance, a combined statistical area may comprise two or more metropolitan statistical areas, two or more micropolitan statistical areas, or combinations of metropolitan and micropolitan statistical areas. Indiana has four such areas within its borders, and three others that include Indiana counties (see Figure 4). More

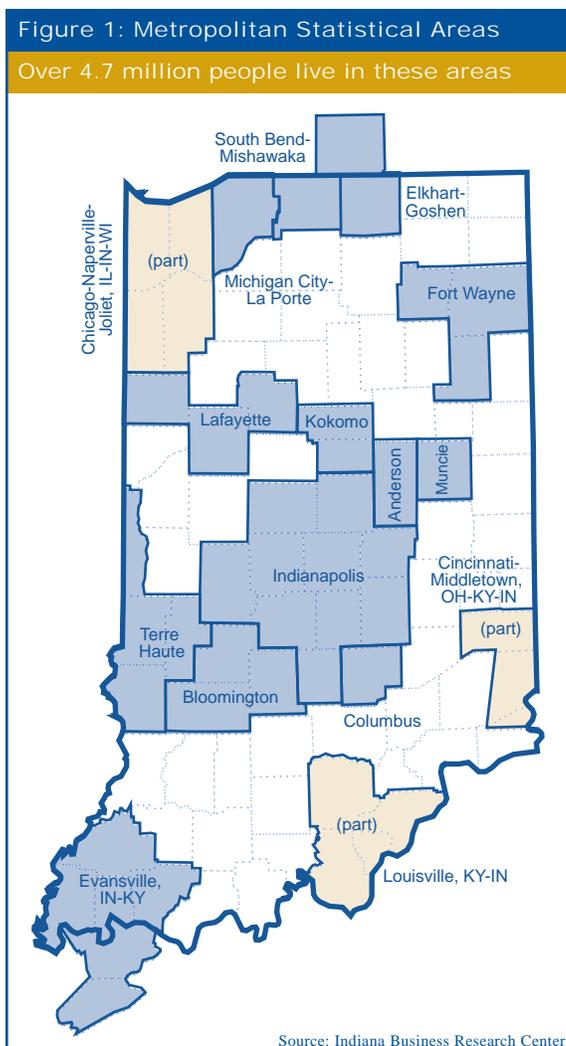
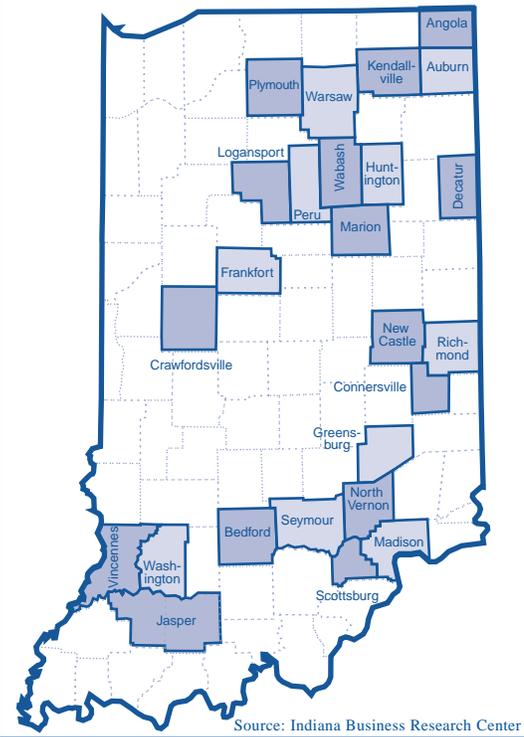


Figure 2: Micropolitan Statistical Areas

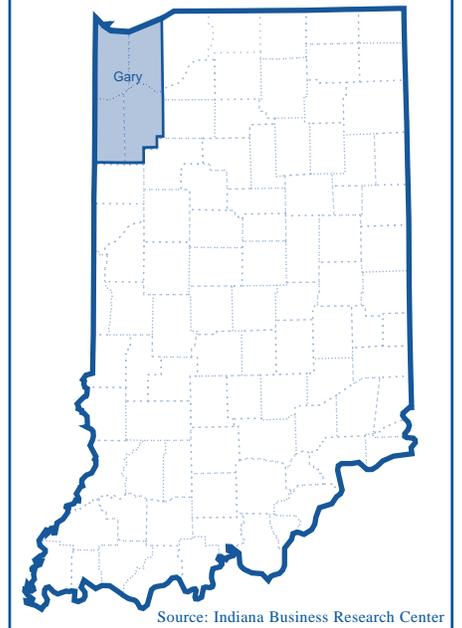
Over 1 million people live in these areas



Source: Indiana Business Research Center

Figure 3: Metropolitan Division

Over 680,000 people live in the division



Source: Indiana Business Research Center

71 of Indiana's 92 counties are part of either a metropolitan or micropolitan statistical area.

definitions for nonstatistical (and particularly funding) purposes, many federal agencies do use these convenient groupings of

than 3.8 million Hoosiers live within combined statistical areas.

What Does This Mean for Hoosiers?

Overall, Indiana has significantly increased the number of metro areas for which statistical data will be made available. This will put Indiana on a variety of lists, benefiting site locators who find these lists convenient for comparing metro areas within states, across regions and throughout the nation. According to the federal Office of Management and Budget (OMB), these areas are defined only for the collection and tabulation of statistical data by the federal government.

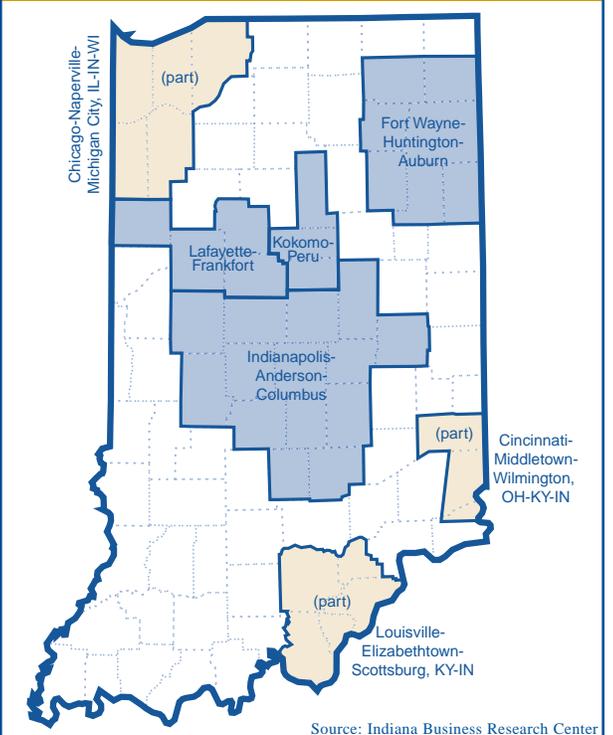
However, even though the OMB advises against the use of these

counties for funding purposes directly or indirectly. Federal agencies such as Housing and Urban Development, the Department of Agriculture and Health and Human Services have used these definitions for grant disbursement and other funding purposes. At this point, no specific information is available outlining their use of the new definitions.

Carol O. Rogers, Associate Director, Indiana Business Research Center, Kelley School of Business, Indiana University

Figure 4: Combined Statistical Areas

Over 3.8 million people live in these areas



Source: Indiana Business Research Center

Commerce Region 10: South Central Indiana

The Area

Commerce Region 10 is comprised of nine counties in south central Indiana: Bartholomew, Brown, Decatur, Greene, Jackson, Jennings, Lawrence, Monroe and Owen. Prior to this year, Monroe County formed the Bloomington Metropolitan Statistical Area, which was the region's only metro area, as defined by the Office of Management and Budget (OMB).

However, the new definitions of metropolitan areas released by the OMB in June 2003 have changed the classifications so dramatically that every county in Region 10 is now part of either a metropolitan (metro) or micropolitan (micro) statistical area.

Bloomington and Columbus are primary cities of metros, while Bedford, Greensburg, North Vernon and Seymour each has its own micropolitan area (see Figure 1). Moreover, Brown and Bartholomew counties are also a part of the

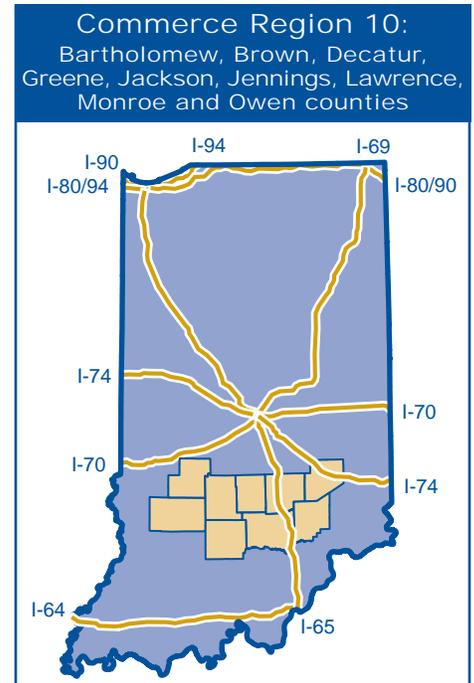
Indianapolis-Anderson-Columbus combined statistical area.

Region 10 had 401,264 residents in 2000, exceeding its 1990 population by 10.8 percent. This is roughly 1 percent more than the state's overall growth. As the population center of the area, Monroe County had the greatest numeric growth (11,585), while Owen County had the greatest percent change (26.1 percent). The Census Bureau estimates that the area grew to 404,133 people by July 1, 2002 a growth of 0.7 percent.

Industrial Mix and Jobs

Major employers in the area include ArvinMeritor, Aisin USA, Cook Group, Cummins Engine, General Electric, GM Powertrain, Indiana University, Valeo Sylvania, Visteon and Wal-Mart Distribution Center.

By 2000, the services industry had the largest share of employment at 23.2 percent. Manufacturing closely followed this at 21.9 percent.



However, manufacturing's growth of 12.7 percent between 1990 and 2000 was far outpaced by the services industry's 33.8 percent growth. The construction industry experienced the most growth, with a 36.8 percent change during the decade. Figure 2 shows which industry experienced the greatest percent change in each county.

Bloomington serves as the economic hub of the region, with Monroe County employing nearly 30 percent of the region's labor force in 2002. Most of those working in Monroe County also resided there, with 4.2 percent of the region's labor force commuting in from elsewhere (primarily from Lawrence, Greene and Owen counties). An additional 4.5 percent of the region's labor force commuted into Commerce Region 7 (the nine-county Indianapolis area).

Figure 1: Population Density in New Metropolitan and Micropolitan Areas

Monroe County is home to 30% of the regional population

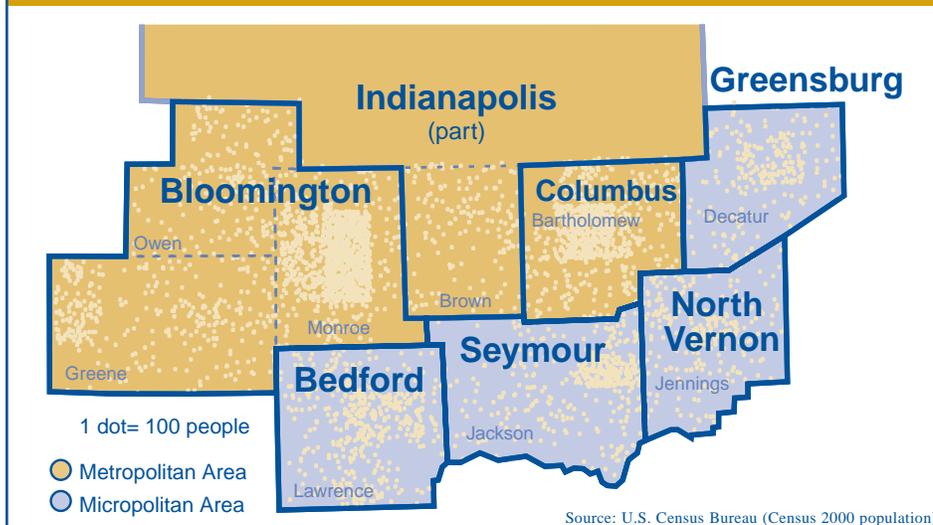
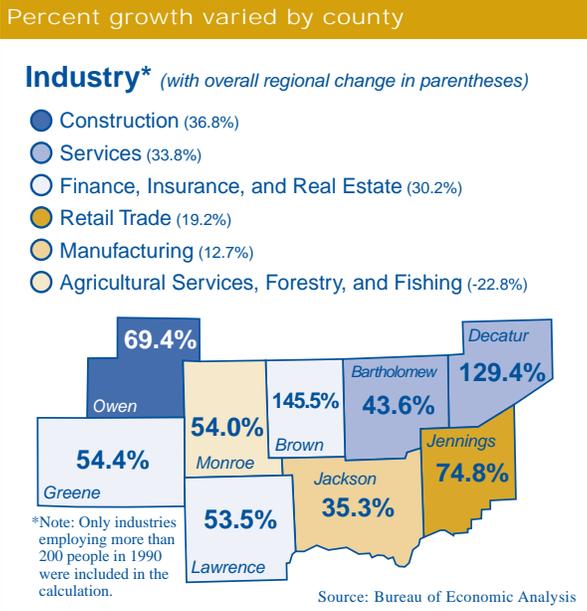


Figure 2: Largest Change in Employment, 1990-2000



Income and Wages

Region 10's per capita personal income for 2000 was \$24,764, ranking it eighth among the 12 Commerce regions. This is roughly \$2,000 lower than the state average of \$26,933.

For the third quarter of 2002, average weekly wages for the area ranged from a high of \$1,448 (management of

companies and enterprises) to a low of \$199 (accommodation and food services). Average regional wages were lower than Indiana's wages in all but three sectors: management of companies and enterprises; educational services; and agriculture, forestry, fishing and hunting.

Additional data is available at: www.stats.indiana.edu/profiles/prcomm10.html.

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

Table 1: Average Employment and Earnings for Third Quarter 2002

Industry	Employment		% of Employment		Avg. Weekly Wage/Job	
	Region 10	Indiana	Region 10	Indiana	Region 10	Indiana
Total Covered Employment	170,863	2,843,962	100%	100%	\$563	\$614
Agriculture, Forestry, Fishing and Hunting	651	14,019	0.4%	0.5%	\$468	\$430
Mining	928	6,852	0.5%	0.2%	\$835	\$880
Utilities	955	16,171	0.6%	0.6%	\$903	\$1,050
Construction	7,648	154,117	4.5%	5.4%	\$614	\$712
Manufacturing	42,916	593,722	25.1%	20.9%	\$753	\$819
Wholesale Trade	3,910	120,673	2.3%	4.2%	\$643	\$798
Retail Trade	19,478	340,545	11.4%	12.0%	\$346	\$392
Transportation and Warehousing	7,231	122,704	4.2%	4.3%	\$602	\$676
Information	2,764	49,432	1.6%	1.7%	\$539	\$676
Finance and Insurance	3,824	103,102	2.2%	3.6%	\$729	\$814
Real Estate and Rental and Leasing	2,192	37,721	1.3%	1.3%	\$397	\$497
Professional, Scientific, and Technical Services	4,152	84,787	2.4%	3.0%	\$708	\$810
Management of Companies and Enterprises	688	26,602	0.4%	0.9%	\$1,448	\$1,052
Administrative and Support and Waste Management and Remediation Services	8,417	149,195	4.9%	5.2%	\$354	\$406
Educational Services	4,572	199,445	2.7%	7.0%	\$636	\$629
Health Care and Social Assistance	19,185	327,931	11.2%	11.5%	\$585	\$626
Arts, Entertainment, and Recreation	1,075	49,712	0.6%	1.7%	\$311	\$437
Accommodation and Food Services	15,195	231,548	8.9%	8.1%	\$199	\$216
Other Services (except Public Administration)	4,388	85,015	2.6%	3.0%	\$356	\$408
Public Administration	6,949	130,173	4.1%	4.6%	\$477	\$603

Source: Indiana Business Research Center, Indiana Industry Employment and Wages, based on ES-202 data from the Indiana Department of Workforce Development

Mid-Year Outlook for the Economy

Sluggish growth for the remainder of 2003. Acceleration during 2004. A strong 2005. This is what the June forecast by the Kelley School of Business' Center for Econometric Model Research (CEMR) at Indiana University calls for in the coming years.

From the June Forecast

The revised first quarter Gross Domestic Product showed slightly stronger growth than the advance numbers released in April. The overall growth rate for the quarter was raised from 1.6 percent to 1.9 percent, the increase coming from higher consumer spending on nondurable goods and a slightly lower trade deficit. These positive factors were partly offset by lower estimates for most other spending components. Perhaps most notable, business investment in equipment showed a decrease of 6.3 percent.

According to the Center, the few pieces of monthly data received so far

for May contained no negative surprises, but nothing to shout about either. Consumer confidence rose slightly after its large jump in April, but is still below encouraging levels. Consumer expectations (a variable used in the Center's model) registered a larger gain, while auto sales fell off in May to 16.1 million units. This annual rate is about a million below the average of the past three years. The labor market is not quite holding its own. The unemployment rate edged up to 6.4 in June, while payroll employment continued to fall.

Policy Assumptions

- The Federal Reserve lowered short-term interest rates by 25 basis points at its June 25th meeting. The forecast included a 25 basis point reduction, but a 50 basis point cut was not out of the question. The Fed is expected to maintain this rate through 2003.
- Defense spending will be elevated over the next two years.

- The just passed tax cut will produce a significant drop in personal taxes in the third quarter.

Future Path of Economy

- Adequate but sluggish growth for the rest of this year (averaging 2.5 percent).
- Acceleration during 2004 (3.5 percent fourth quarter to fourth quarter).
- A strong 2005 (3.7 percent growth).
- Much of the disposable income from the tax cut is saved (rather than spent), at least immediately. This is consistent with economic theory if households believe that the lower taxes are only a temporary phenomenon.
- The tax cut will significantly increase the federal deficit, which rises toward \$400 billion.

Indiana

Because the Indiana economy is heavily influenced by the auto and construction industries, it will continue to more keenly feel the effects of the sluggish national economy. Economist Jim Smith from the Kelley School of Business questions how long super-low interest rates will keep the car and housing businesses strong. How long, Smith asks, can U.S. carmakers continue to give zero percent financing when they are losing market share, and how many more people can afford new homes if they are facing the unemployment line?

Figure 1 (left) and Table 1 (on back cover) show recent indicators of Indiana's economic performance.

(continued on back cover)

Figure 1: Payroll Employment Estimates for May 2003 Compared to May 2002



INCONTEXT

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IN the News

(continued from page 11)

A Note on the Unemployment and Payroll Data from the Bureau of Labor Statistics:

The payroll data have been substantially revised and reflect an annual benchmarking. The old data showed job gains last summer, followed by large declines in employment more recently. The revised data show flat employment last summer and fall, meaning that the recent job loss now appears less severe. The disaggregate data were also converted to NAICS codes.

*Carol O. Rogers, Associate Director,
Indiana Business Research Center, Kelley
School of Business, Indiana University*

Table 1: Indiana Indicators

May 2003:	
Unemployment Rate:	4.9%
Payroll Employment:	2,872,200
Gross State Product	
2001:	\$189,919 billion
2000:	\$189,778 billion
Per Capita Income	
2002:	\$28,240
2001:	\$27,522

Source: Indiana Department of Workforce Development and U.S. Bureau of Economic Analysis



Indiana County Population Projections: 2005-2040

View by county, region (Commerce and Workforce), metro area (new and old) or build your own custom region.

Now available at www.stats.indiana.edu



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

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