

the demand for corn for these plants will be the equivalent of 81 percent of Indiana's 2006 corn production. Even if only a fraction of these plants are built, this new usage for corn will dramatically alter Indiana's agriculture (see **Figure 1**).

Biodiesel produced from soybean oil is not developing as quickly as ethanol. The largest facility will be a new soybean crushing facility being built at Claypool in Kosciusko County by Louis Dreyfus, Inc. That plant will process 50 million bushels of soybeans per year, equivalent to 17 percent of Indiana's 2006 soybean production.

Why has interest in biofuels approached "gold rush" status in the last year? With crude oil prices above \$50 a barrel, biofuels, and ethanol in particular, have become extremely profitable. As recently as 2004, crude oil was well below \$40 a barrel, a point where biofuels are not profitable. In 2006, with crude oil in the \$60 to \$70 a barrel range, the outlook for the ethanol market is rosy. However, profitability in the ethanol market is vulnerable to the price of crude oil.

Farm Income and Farmland Values

How will the development of ethanol and biodiesel plants in Indiana affect farm incomes and farmland values? The answer for farm incomes depends on the enterprise, with grain operations benefiting from the biofuels boom and livestock operations who must buy grain to feed their animals struggling. To highlight this point, between October

12, 2006 (when World Agricultural Supply and Demand Estimates were released), and November 3, 2006, the December 2006 corn futures price had increased about 67 cents from \$2.77 to \$3.44 because U.S. corn production was revised downward. This large increase in the price of corn will

translate into an additional \$112 per acre of income for the projected 2006 state average corn yield of 167 bushels per acre. However, Dr. Chris Hurt estimates that the typical Indiana hog

operation will not be profitable if the price of corn (the primary cost for hog operations) is above \$3.50. For Indiana hog producers, this 67 cent increase in the price of corn means that the profitability in their operations is quickly disappearing.

Farmland value depends on many factors, including long-term interest rates, government price support payments, real estate taxes, and most importantly, on the returns to crop production. Looking to 2007, the biofuels boom can be expected to increase the value of farmland with its large impact on the returns to crop production. Given the current price levels for corn and soybeans, prices are well above the level where government price support payments would be triggered, reducing the influence of government programs. Long-term interest rates can be expected to increase, which would put downward pressure on land prices, but this increase is happening slowly. Overall, the biofuels boom will increase the value of Indiana farmland for 2007 and beyond. ■

For more information about Indiana farmland values, see the Purdue Land Value Survey at: www.agecon.purdue.edu/extension/pubs/paer/2006/august/paer0806.pdf

More information about the Indiana agricultural outlook can be found at: www.agecon.purdue.edu/extension/pubs/paer/2006/october/paer1006.pdf

Indiana

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With the end of 2006 in sight, the year is shaping up to be one of even tamer growth than we predicted a year ago. As shown in **Figure 1**, Indiana's total nonfarm payroll employment in 2006 has continued its relatively steady climb that began in July 2003. As of September 2006, nonfarm payrolls accounted for 2,980,200 Indiana jobs. This level is barely 1 percent below the state's all-time employment peak reached in May 2000, and it's almost 100,000 jobs higher than the post-recession low of three years ago.

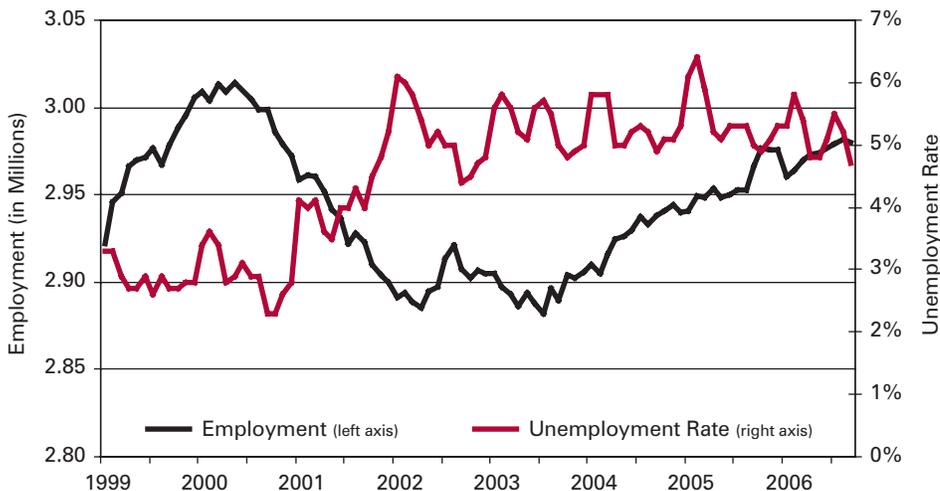
Employment

Employment growth began the year at a fairly slow pace of about 20,000 new jobs annually compared to a year earlier. Then the pace picked up to a year-over-year rate of about 25,000 to 30,000 new jobs during the summer, but it slowed substantially in September. This continues a trend of decelerating job growth over the past two years, but at least we're still adding jobs in most months.

Indiana's modest job growth has been shared across most industries. The sectors with the largest contributions to new jobs over the past twelve months have been education and health services (averaging 6,742 new jobs year-over-year); leisure and hospitality (4,718 jobs); trade, transportation, and utilities (3,742 jobs); professional and business services (3,017 jobs); and construction (2,917 jobs).

The traditional bastion of the Hoosier economy, manufacturing, averaged an annual growth rate of only 383 jobs over the past twelve months, and overall factory employment has not budged much for the past two years. Even with this slow growth, however, Indiana is

Figure 1
Indiana's Monthly Nonfarm Employment and Unemployment Rate



Note: Employment is seasonally adjusted; unemployment rates are not.
 Source: Bureau of Labor Statistics

still the nation's most manufacturing-intensive state with respect to employment, which accounted for 19.1 percent of all payroll jobs in September.

The overall pattern evident in Indiana employment this year is neither strongly encouraging nor discouraging. Most sectors are experiencing slow growth, with a bit more momentum evident in the trends for health care and education, professional and business services, and leisure and hospitality. The government, manufacturing, and information sectors' employment, meanwhile, remains relatively flat on average. Finally, there has been some recent acceleration in the financial activities sector that bears watching.

Indiana's unemployment rate in 2006 continued to meander in the general range of 5 percent, as it has for several years. However, the unemployment rate has declined over the last few months, and the number of people unemployed has dropped by nearly 30,000 since July to 153,550.

Other Indicators

A state's economic health is measured by more than just jobs. Growth in

Indiana's gross state product¹ (GSP, the broadest measure of total output of a state's economy) was 1.3 percent last year, compared to 3.6 percent for the nation. Only five states had slower growth in GSP in 2005. The size of Indiana's economy now ranks sixteenth nationally, overtaken last year by Maryland.

Preliminary data from the Bureau of Economic Analysis (BEA) indicate that, interestingly, manufacturing was a major contributor to Indiana's year-over-year GSP growth. Continued improvements in manufacturing productivity help Hoosier factories produce more output without having to hire many more workers. Only seven states in 2005 had higher output than Indiana in total manufacturing, and only four states in durable goods manufacturing.

Indiana's per capita personal income, which reflects individual

earnings from all sources, slipped nearly a percentage point last year to 90.3 percent of the national average, below thirty-four other states. While total income of Hoosiers is growing in the aggregate, Indiana has not grown as fast as other states on a per capita basis. Early figures for personal income in the first half of 2006, however, indicate that Indiana's performance relative to other states may be improving slightly.

Finally, the elimination of Indiana's major budget deficit and generation of a surplus has enabled the state to put funds back into a wide range of neglected programs. This government spending in turn represents a stimulus to economic activity in many areas.

Indiana's Outlook for 2007

Indiana's economy should grow modestly in 2007, but there are challenges to this forecast. The domestic automobile industry is cutting back production, which will reduce demand for the goods and services of many Indiana firms. However, as supplier firms strive to broaden their customer base, they may be able to lessen the impact of the Big Three's cutbacks.

Indiana's housing market has not

yet experienced the shock of falling prices and weakening demand that has hit some other parts of the nation, just as home prices here generally have not appreciated nearly as much as in those regions. As a result,

“The elimination of Indiana's major budget deficit and generation of a surplus has enabled the state to put funds back into a wide range of neglected programs.”

Indiana isn't likely to see a major downturn in the housing market, which drives much of the other activity in the economy. The pace of new home construction in Indiana, however, will likely slow down a bit in the year ahead.

The construction sector appears poised to grow at a faster pace next year as work on several fronts kicks into gear. New construction planned for the Major Moves transportation program is scheduled to rise significantly in 2007, which could stimulate thousands of new jobs throughout the state. Construction should also get under way on several major new plant locations or expansions that have been announced, involving several thousand additional jobs.

Some specialized industries have shown strong signs of vitality in recent months and are likely to fare well in the coming year. These include life sciences firms and biofuels production and research, among others.

Major risks to the state outlook are not overly troubling, although the economy may be hit by curve balls from any direction. Energy costs are not expected to rise greatly, and consumers have become somewhat used to gasoline prices well over \$2 per gallon. As long as we don't see a sudden large jump, consumers will likely maintain a fair level of discretionary spending. But unexpected shocks to the economy could dampen this outlook with little notice.

In conclusion, Indiana should gain about 20,000 to 25,000 jobs in 2007, and the state's unemployment rate should remain about where it is, in line with the expectation nationally. Manufacturing jobs are not likely to grow substantially in 2007, which will be a year of preparation for stronger manufacturing growth ahead. The sectors likely to account for much of the expected job growth are health and education services, construction, trade and transportation, and leisure and hospitality. In addition, the state's per capita personal income should level off or improve slightly as a percentage of the national figure. ■

Notes

1. The BEA now calls this "Gross Domestic Product by State."

Anderson and Muncie

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Forecasting is an exercise fraught with risk, and that risk doubles with forecasting the performance of small-sized urban economies. Not only are the data that we use to assess and project the future for smaller metro areas of uncertain quality, the comparatively small geographies involved also make it possible for one or two unforeseen events to undo even the best efforts at prediction.

But the businesses, governments, and families in Anderson and Muncie are nonetheless more concerned than most about the future of their economies. Since the mid-1990s, both of these communities—as well as neighboring Kokomo and Richmond—have seen stagnation and decline, as transition in the manufacturing economy continues to erode their economic base.

The past year (2006) saw several dramatic announcements of new investment and significant projected employment gains for both Anderson and Muncie. Unfortunately, those announcements were offset by negative developments in several established manufacturing companies. The upshot is that the slow declines in employment that

have occurred during most of the last decade are likely to continue in 2007.

Anderson

The Anderson metro (Madison County) was reborn after the 2000 Census, after spending a decade as part of the Indianapolis (now Indianapolis–Carmel) metro area. That means that very current estimates of employment by major industry are available from the Current Employment Survey (CES), the same source for state and national level payroll employment estimates. Those data portray the Anderson economy as having stabilized in 2006 from the job declines suffered in previous years.

In the first three quarters of 2006, employment averaged about 100 jobs, or 0.2 percent, higher than the same period in 2005. That stability was largely due to a 300-job increase officially estimated for Madison County manufacturing employers. This 4.7 percent growth in factory jobs, if it survives the coming revisions, would eclipse the manufacturing job growth of every other metro area in Indiana over the same period.

Unfortunately, the CES employment estimates are almost

Facts about Madison and Delaware Counties

People and Income	Madison County (Anderson)	Delaware County (Muncie)
Population (2005)	130,412	116,362
Change Since 1990	-0.20%	-2.80%
Land Area (in square miles)	452.1	393.3
Population Density (2005)	288.5	295.9
Households (2000)	53,052	47,131
Per Capita Personal Income (2004)	\$28,337	\$26,825
Poverty Rate (2003)	10.6	12.5