2012 MANUFACTURING + LOGISTICS

Indiana Report

The 2012 Manufacturing and Logistics Indiana Report shows how the state ranks among its peers in several areas of the economy that underlie the success of manufacturing and logistics.

These specific measures include: manufacturing and logistics industry health, human capital, cost of worker benefits, diversification of the industries, state-level productivity and innovation, expected fiscal liability, tax climate, and global reach.

About Conexus Indiana

Conexus Indiana is a private sector-led initiative focused on the advanced manufacturing and logistics sectors—two industries that combined employ more than one of every five Hoosiers. We are focused on making Indiana a global manufacturing and logistics leader by strengthening the state's human capital, building industry partnerships to capitalize on new opportunities and address key challenges, and promoting a better understanding of the importance of these industries to our economic future.

Conexus Indiana's most urgent mission is building tomorrow's manufacturing and logistics workforce, preparing Hoosiers to take advantage of high-tech careers in these exciting fields. We are also focused on developing a unified strategy to enhance our logistics capabilities, linking manufacturers with in-state suppliers to streamline supply chains and spur investment in Indiana, and undertaking other strategic projects that will help the manufacturing and logistics sectors thrive here at the Crossroads of America.

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About Ball State CBER

The Center for Business and Economic Research (CBER) is an economic policy and forecasting research center housed within Ball State University's Miller College of Business. CBER research encompasses health care, public finance, regional economics, transportation, and energy sector studies.

The center produces the CBER Data Center—a one-stop shop for economic data, policy analysis, and regional demographics—and the Indiana Business Bulletin—a weekly newsletter with commentary on current issues and regularly updated data on housing, wages, employment, and dozens of other economic indicators.

In addition to research and data delivery, the center serves as the business forecasting authority in the Muncie area—holding the annual Indiana Economic Outlook luncheon and quarterly meetings of the Ball State University Business Roundtable.

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Grades for Indiana

State Overview

June 2012 marks the third anniversary of the end of a recession in which the rebound has been markedly poor. A full understanding of the reasons for the tepid recovery nationwide will take some years to fully understand, yet a few potential culprits are now emerging. Uncertainty over business costs, most especially health care and federal taxes, changes to lending requirements (both regulatory and market based), and a mismatch between worker skills and job openings are likely perpetrators of a slow recovery.

The world has emerged unevenly from the recession. The BRIC nations (Brazil, Russia, India and China) have recently seen some slowing economic activity. In Europe, unprecedented fiscal strains and a turbulent financial system and frightened financial markets have plunged the continent into a recession. This recession will slow the U.S. economy. Another U.S. recession, either in 2012 or 2013 is the most likely consequence of this European slowdown.

As we move farther away from the Great Recession, manufacturing production has returned to pre-recession levels. Manufacturing employment in Indiana continues to be strong, but in keeping with productivity trends is slightly lower than the 2007 levels. News about Indiana's manufacturing sector remains mostly good. Important fiscal reforms in Indiana have left Hoosier businesses with a sense of tax certainty that is notably absent in much of the nation (reflected in the new 'expected liability gap' category, which assesses exposure to public debt and therefore the risk of future tax increases or services cutbacks). The passage of right-to-work legislation marks an important milestone for many Hoosier businesses, and changes to legislation affecting school choice and performance hold forth hope for a more productive labor force. These changes are designed to be long run adjustments to the economic climate of Indiana, and cannot, by themselves alter the short run risks that accompany a world and national slowdown.

State Grade History and Comparison with Other Midwestern States

SUBJECT	INDIANA GRADES BY YEAR					OTHER MIDWESTERN STATES IN 2012								SUBJECT
	2008	2009	2010	2011	2012	IL	IA	KY	MI	MN	MO	OH	WI	
MANUFACTURING INDUSTRY HEALTH	A	A	A	A	**A**	C	A	B	A	B-	C	A	B+	MANUFACTURING INDUSTRY HEALTH
LOGISTICS INDUSTRY HEALTH	B-	B-	B+	A	**A**	A	B	B	C+	B	B	A	B-	LOGISTICS INDUSTRY HEALTH
HUMAN CAPITAL	D+	D+	C-	C	**C-**	C	B	D-	D	A	C	C	B+	HUMAN CAPITAL
WORKER BENEFIT COSTS	C	C	C	C	**D+**	D-	C	C	D	C	B+	D	D-	WORKER BENEFIT COSTS
TAX CLIMATE	A	A	A	A	**A**	F	D-	C	C-	F	A	C	D+	TAX CLIMATE
EXPECTED LIABILITY GAP	NEW CATEGORY				**B**	F	B-	D-	C-	B	B	D+	A	EXPECTED LIABILITY GAP
GLOBAL REACH	A	A	A	A	**A**	B	C-	B+	B+	C	C	A	C	GLOBAL REACH
SECTOR DIVERSIFICATION	–	–	C-	C	**C+**	C	C-	B+	D-	C	B+	B-	C	SECTOR DIVERSIFICATION
PRODUCTIVITY *and* INNOVATION	C	C	C	C+	**B+**	B	C	D	A	B	C	C	C	PRODUCTIVITY *and* INNOVATION

Quick Facts

» Indiana has received straight As in manufacturing, tax climate, and global reach for five consecutive years.

» Indiana has consistantly improved its grades in logistics, benefit costs, diversification, and productivity/innovation.

» Indiana exports manufactured goods to every continent except Antarctica.

» Manufacturing workers earn roughly 50 percent more than non-manufacturing workers who have the same level of education.

More Online

Visit the Manufacturing and Logistics Report website to find a methodology for grade calculation, a glossary of terms, national grades for each category, and a full performance history for each state: conexus.cberdata.org

Examining Indiana's Performance

Manufacturing Industry Health: A

Indiana remained strong in this year's scorecard, holding on to its A in the manufacturing industry. The category measures the size of each sector and its compensation of workers.

Logistics Industry Health: A

Similarly, Indiana remained maintained an A in the logistics sector as whole. These sector measures include the relative size, earnings, transportation flows and investment in infrastructure affecting this sector.

Human Capital: C-

The state dropped its human capital grade. The state saw large relative declines in several areas, including first year retention rates at community and technical colleges, the share of associates degrees awarded on a per capita basis, and in 8th grade mathematics tests scores. Smaller declines occurred in high school graduation rates and younger workers with associate's degrees. This is concerning given the primacy of importance in human capital in Indiana's economic future. What remains unknown is how much these declines are related to the great recession. The past four years have seen significant declines in all these metrics throughout the nation, and so it is possible the relative changes in Indiana's rankings is due to transient, not permanent changes. Transient changes could be factors such as a larger number of students remaining in community and technical colleges, but not graduating, or one time policies in other states that accelerated degree awards. This is an area that must receive special attention in the coming years.

Worker Benefit Costs: D+

Indiana also saw a decline in its worker benefit rankings, but in this case the changes were accompanied by both good and bad news. Health care premiums dropped significantly as did fringe benefit costs in total. Long-term health care costs saw a relative increase as did federal health-related expenditures in the state. Workers' compensation rates declined modestly.

Tax Climate: A

Rankings in tax climate remained constant as an A, which represents an important consideration in expansion and relocation considerations for firms.

Expected Liability Gap: B

Indiana received a B in its expected liability with very strong showings in bond ratings (a tie for 1st place) and total unfunded liability as a percentage of GDP. Average benefits as a share of GDP and unfunded state pension and bond funds on a per capita prevented the state from moving into solid A range.

See 'manufacturing situation' on the next page for greater examination.

Global Reach: A

Indiana remained a very robust A in its global reach, but with a somewhat slowing rate of export growth.

Sector Diversification: C+

The state moved from a C to C+ in sector diversification, an important improvement in the automobile and automotive intensive state.

Productivity and Innovation: B+

Likewise, the state moved up to a B+ in productivity and innovation, with dramatic gains in manufacturing value added and patents.

Figure 1. Capital-Labor Ratio of Earnings in State Manufacturing

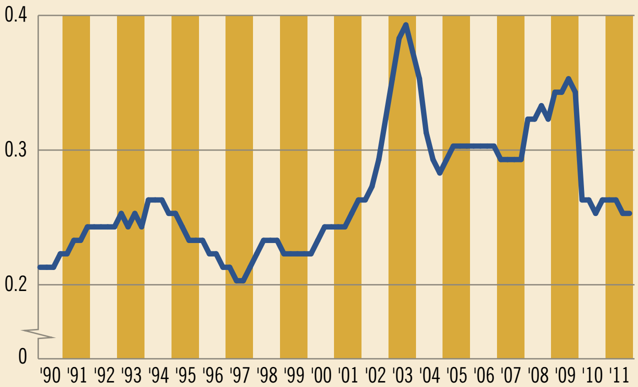


Figure 2. Earnings to Capital and Labor in State Manufacturing (Percent Change by Quarter)

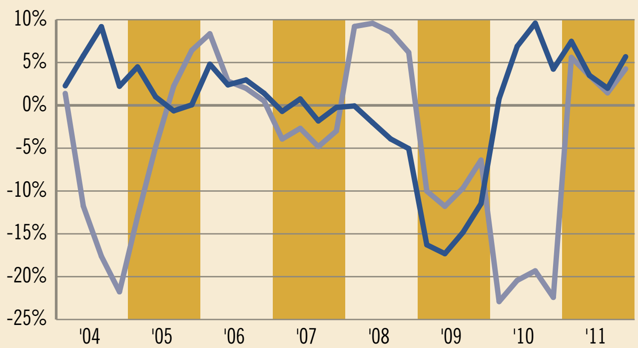
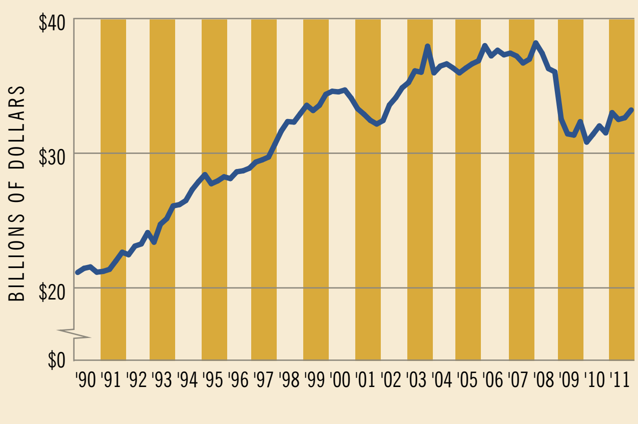


Figure 3. Durable Manufacturing Earnings in Indiana (Not Seasonally Adjusted)



The Manufacturing Situation

In 2011 we predicted growth in Indiana's manufacturing sector to stabilize a bit from the blistering recovery of 2010. That appears to have been the outcome, with manufacturing production expected to continue to grow through any forecast horizon. However, this likely means a return to trend on employment growth, with productivity reducing the demand for workers, albeit at a much reduced pace from the 2002-2007 period. This is evidenced by the capital labor ratio's of payments within Indiana's manufacturing sector. The dramatic job losses which accompanied the post-2001 recession were accompanied by very high payments to non-wage earnings (primarily payments to capital and rents). This again occurred through the great recession, but has since diminished. This may signal a period of more stable levels of employment in manufacturing. *See Figure 1.*

Similarly, year-over-year changes to earnings by owners of plant and equipment and workers have harmonized in the post-recession period. Along with the stable capital-labor ratio, this may suggest a period of lower volatility in manufacturing employment has emerged in the state. *See Figures 2 and 3.*

Future revenue demands by state and local governments are an increasing concern to footloose industries (*see grades for expected liability gap*). In particular, pension obligations in many states offer an unattractive choice between higher taxes and fewer public services. Accompanying this policy concern is an increased likelihood of political strife associated with changes to pension and health care benefits for state and local government workers.

Estimates of the size of these obligations vary dramatically, and we have here reported conservative estimates. It is worth noting that credible research suggests even higher levels of per capita debt for many states than we use here (though the relative state rankings are unchanged). This is because the actuarial estimates of fund growth are often unrealistically high, as they are based on a long term moving average that has seen a financial bubble. Likewise, the decline in the labor force over the previous 36 months suggests an increase in the retirement rate among eligible workers, a trend that will further unbalance the funds.

Indiana's unfunded liability (as reported in this study) is $1,879 per person. This is a tractably low figure, and allows the state to enjoy the highest levels of credit security and bond rankings. This is a virtuous cycle which reduces the cost of financing this obligation, and mitigates the potential ill effects on public services, public workers and tax payers. Under the most conservative numbers available, liability per person is $5,427 in Illinois; $1,725 in Michigan; $5,544 in Ohio; and $4,088 in Kentucky.

Data at the municipal level paints a difficult picture of financing. For example, there are estimates of Chicago's unfunded liability which place it in excess of $35,000 per resident. These are not figures which can be repaid through taxation, but rather will lead to dramatic cuts in pensions, health benefits and public sector employment. This will likely be accompanied by higher taxes in a combination of policy measures commonly called austere.

These differentials will matter greatly in business location and expansion decisions for firms able to choose their places of operations. Indiana is likely to benefit from this outcome.

The 2012-2013 Forecast

The past 12 months (June 2011 through June 2012) saw Indiana manufacturing rebound dramatically. Production of goods in nearly every category rose, with employment and significant announcements of new investment marking this exciting period. As the scorecard indicates, Indiana continues to be a place where manufacturing can grow, and as of the most recent Labor Department data, Indiana had roughly one of every seven new jobs created nationwide. Unfortunately, the economy faces challenges that will dramatically change this prediction for the coming year.

Since January, nearly every important global indicator of business activity has remained flat or declined. In the United States, job growth has shrunk for four consecutive months and is now beneath the rate at which the unemployment rate will remain steady. Consumer sentiment is flat and retail sales have declined for four months to a zero rate of growth for May 2012. Inventories are rising, new factory orders in the most manufacturing-intensive regions have declined, and serious discussion about additional fiscal stimulus has gripped the Federal Reserve. Together this signals a much slowed U.S. economy.

Internationally, Europe has entered a recession, with several nations, (notably, Spain, Greece, and Portugal) seeing accompanying unemployment at Great Depression levels. Systemic risk in the financial markets is leading to sporadic, but dramatic runs on national banks in these nations, and an overall period of significant risk in Europe insures an even slower rate of growth in the U.S. Simultaneously, China's economy has slowed dramatically, spawning a large fiscal stimulus. Brazil's economy has weakened to the point that its central bank has cut rates to historic lows, and Indiana's economy has halved output growth in two quarters. Any rebound from the previously fast growing BRIC nations will prove elusive during this downturn. Canada's government has announced it is preparing for a new recession, as have a number of other important, but less closely tied nations. The economy is at a very dangerous stretch, where the probability of a recession in the United States is very high. Indeed, it is likely that a formal declaration of a national recession will be dated to early 2012.

Despite its favorable business climate, Indiana's manufacturing and logistics sectors will not fail to avoid slower growth. We predict statewide that manufacturing will slow in both quarters, with a year-over-year growth rate of 1 percent. *See Figure 4.* Bloomington, the greater Cincinnati area (including an expanded Indiana region), and the Indiana counties adjacent to Louisville will experience growth in excess of 1.5 percent. Muncie will see growth of nearly 2 percent as new manufacturing facilities come online, and the Michigan City region will see annual growth of just over 2 percent. Terre Haute and Lafayette will see growth over 1 percent during this period. Importantly, this prediction suggests no decline in manufacturing income over this period in any metropolitan area of the state. This is in sharp contrast to the experience of the past business cycles in which Indiana manufacturing has slowed significantly.

The greatest threat to this forecast remains the stability of European monetary union and the viability of the European financial system. This is the issue the global economic community will be watching closely throughout the next year or longer.

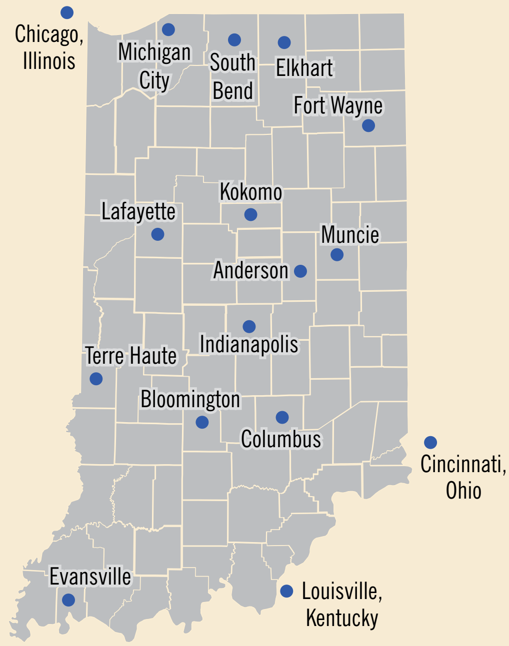


Figure 4. Manufacturing Forecast for Indiana Metro Areas, 2012-2013

METRO AREA	Q3-Q4 2012	Q1-Q2 2013	ANNUAL AVERAGE
INDIANA	*1.60%*	*0.50%*	*1.00%*
ANDERSON, IN	1.08%	0.32%	0.70%
BLOOMINGTON, IN	2.32%	0.64%	1.48%
CHICAGO-JOLIET-NAPERVILLE, IL-IN-WI	0.49%	0.14%	0.32%
CINCINNATI-MIDDLETOWN, OH-KY-IN (incl. Ripley, Jefferson, & Switzerland Counties)	2.17%	0.63%	1.40%
COLUMBUS, IN	1.20%	0.35%	0.78%
ELKHART-GOSHEN, IN	0.42%	0.12%	0.27%
EVANSVILLE, IN-KY	2.49%	0.72%	1.60%
FORT WAYNE, IN	0.41%	0.12%	0.26%
INDIANAPOLIS-CARMEL, IN	0.13%	0.04%	0.08%
KOKOMO, IN	0.81%	0.24%	0.52%
LAFAYETTE, IN	1.95%	0.57%	1.26%
LOUISVILLE-JEFFERSON COUNTY, KY-IN	2.55%	0.74%	1.64%
MICHIGAN CITY-LA PORTE, IN	3.14%	0.91%	2.03%
MUNCIE, IN	3.02%	0.88%	1.95%
SOUTH BEND-MISHAWAKA, IN-MI	0.75%	0.22%	0.48%
TERRE HAUTE, IN	1.96%	0.57%	1.27%

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