

business brief



CENTER FOR BUSINESS AND
ECONOMIC RESEARCH

ABOUT THE AUTHOR

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1. Quarterly Workforce Indicators (QWI) is a set of economic indicators including employment, net job flows, job creation, wages, and worker turnover. They can be queried by various levels of geography - state, county, metro, and workforce investment area, as well as by industry, gender, and age of workers.

2. Four-quarter moving average of the quarterly data from 1998 Q1 to 2008 Q4 was used. The data from 1998 Q1 to 2008 Q3 were used for the "end-of-quarter monthly earnings of employees" variable.

Trends in Employment and Earnings: Delaware County, Indiana

Srikant Devaraj, *Research Associate*

This business brief identifies key economic trends in Delaware County, Ind., through the last decade. The primary data source is the quarterly workforce indicators (QWI¹). We focus on employment (number of jobs) during the quarter, total quarterly payroll and end-of-quarter average monthly earnings of employees.

This analysis was performed for overall NAICS industries and also specific industry sectors. The dollar values for each year were adjusted for inflation using the Consumer Price Index (CPI).

Figure 1 shows the trend for total employment.² The average level of employment

decreased from 67,185 in 1999 to 55,042 in 2008 with some variability. Peak employment was 70,446 in the second quarter of 2000 and then gradually decreased until the end of 2005. Employment increased by about 7.3 percent (61,770 jobs) during the second quarter of 2006 through 2007, and then began to decline. The total quarterly payroll and end-of-quarter average monthly earnings of employees followed similar trends.

According to National Bureau of Economic Research's (NBER) business cycle expansions and contractions, 2001 Q2 through 2001 Q4, and 2008 Q1 to the present are classified as recessions. These time periods are marked in blue to indicate these recessions.

Figure 1: Total Employment (Four-quarter moving average)



Figure 2: Employment in Major Industry Sectors
(Four-quarter moving average)

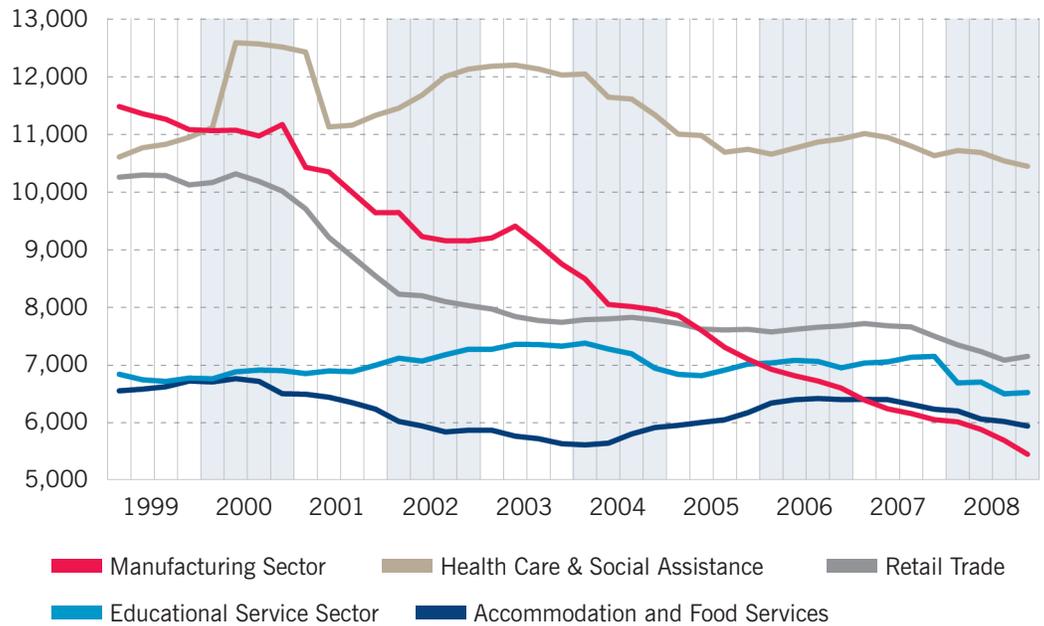


Figure 3: Payroll for Major Industry Sectors (Inflation adjusted)

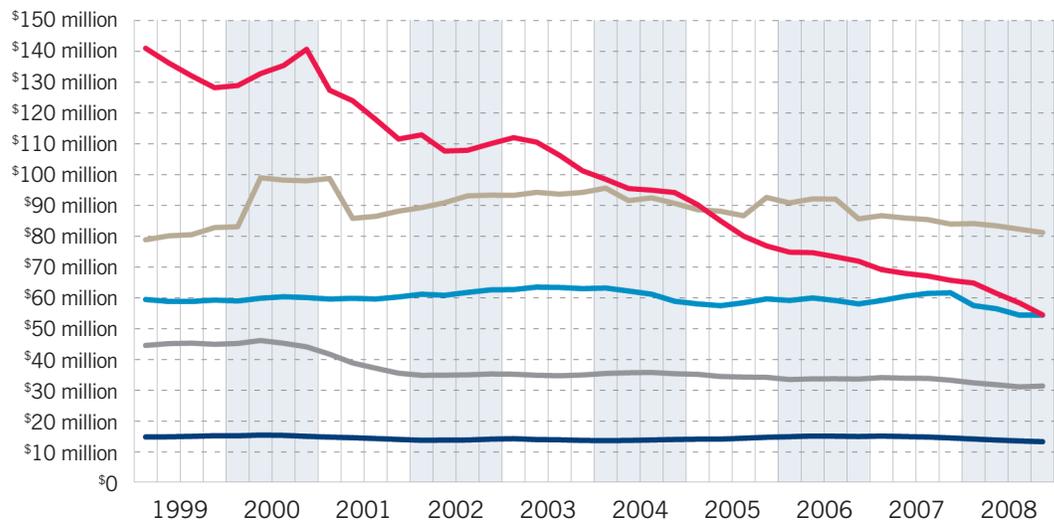


Figure 2 shows the employment trends for industry sectors with the most jobs in Delaware County.³ The number of jobs in manufacturing dropped sharply each quarter. There was less variation in the health care sector, which experienced a quick boom then a drop from 2002 to 2005. Although the employment in the retail trade sector dropped by 35.5 percent in 2006 when compared to 1999, marginal increases occurred thereafter. The educational service sector had only minor variations in employment.

Figure 3 shows trends in payroll for major industry sectors.⁴ The total quarterly payroll⁵ for the manufacturing sector dropped significantly by 61.4 percent from \$140.39 million in 2000 Q4 to \$54.22 million in 2008 Q4. Other sectors such as accommodation and food services, retail trade, educational services, and health care and social assistance showed slight variation in payroll and almost stayed at the 1999 level. The average monthly earnings in each sector followed trends similar to that of payroll.

3. Again, we use a four-quarter moving average.

4. Industries with more than 5,000 employees were treated as "major sectors".

5. Adjusted for inflation using the CPI.

Table 1: Employment, Payroll, and Average Monthly Earnings by Industry in Delaware County, Ind.

NAICS Sectors	Employment				Payroll				Average Monthly Earnings			
	1998	2008	Difference	% Change	1998	2008	Difference	% Change	1998	2008	Difference	% Change
Total	67,186	54,662	-12,524	-18.64%	\$480,017,545	\$378,779,069	-\$101,238,476	-21.09%	\$2,755	\$2,518	-\$236	-8.57%
Agriculture	160	136	-24	-15.00%	\$ 523,134	\$575,018	\$51,884	9.92%	\$1,554	\$1,616	\$ 62	4.01%
Utilities	268	201	-67	-25.02%	\$3,805,959	\$3,258,099	-\$547,860	-14.39%	\$4,261	\$5,047	\$ 786	18.45%
Construction	3,374	3,004	-370	-10.97%	\$25,910,642	\$23,100,161	-\$2,810,481	-10.85%	\$3,093	\$2,911	-\$182	-5.88%
Manufacturing	11,483	5,249	-6,235	-54.29%	\$140,723,638	\$51,721,432	-\$89,002,207	-63.25%	\$4,323	\$3,350	-\$973	-22.51%
Wholesale trade	1,300	1,572	272	20.92%	\$12,386,511	\$17,267,668	\$ 4,881,157	39.41%	\$3,632	\$3,925	\$ 293	8.06%
Retail trade	10,259	7,170	-3,089	-30.11%	\$44,302,367	\$31,422,228	-\$12,880,139	-29.07%	\$1,710	\$1,655	-\$55	-3.22%
Transportation and warehousing	3,847	1,103	-2,744	-71.34%	\$26,687,590	\$ 8,662,251	-\$18,025,339	-67.54%	\$2,943	\$2,649	-\$295	-10.01%
Finance and insurance	1,690	1,885	195	11.53%	\$14,395,049	\$17,718,802	\$ 3,323,754	23.09%	\$3,116	\$3,332	\$ 216	6.95%
Professional, scientific, and technical services	1,899	2,265	367	19.30%	\$13,419,888	\$20,610,297	\$ 7,190,409	53.58%	\$2,725	\$3,345	\$ 619	22.73%
Administrative and support & waste management and remediation services	2,767	2,820	53	1.92%	\$ 9,132,508	\$10,432,057	\$ 1,299,548	14.23%	\$1,484	\$1,538	\$ 54	3.62%
Educational services	6,841	6,938	97	1.41%	\$59,207,244	\$57,710,781	-\$1,496,463	-2.53%	\$3,007	\$2,783	-\$223	-7.43%
Health care and social assistance	10,609	10,243	-367	-3.45%	\$78,582,447	\$80,083,332	\$ 1,500,885	1.91%	\$2,826	\$2,765	-\$61	-2.16%
Accommodation and food services	6,554	5,892	-662	-10.09%	\$14,593,809	\$13,032,415	-\$1,561,394	-10.70%	\$937	\$876	-\$62	-6.57%
Other services (except public administration)	2,168	1,735	-433	-19.98%	\$ 9,146,351	\$ 6,952,760	-\$2,193,591	-23.98%	\$1,613	\$1,415	-\$198	-12.28%
Public administration	1,657	1,615	-41.25	-2.49%	\$12,982,383	\$13,836,385	\$ 854,003	6.58%	\$2,785	\$2,840	\$ 55	1.97%

Table 1 shows the employment, payroll and average monthly earnings of all the NAICS sectors. Between 1998 and 2008, total employment declined by 16 percent (10,801 jobs). The largest losses (in terms of number of jobs) occurred in manufacturing 54 percent (6,235 jobs), transportation & warehousing 71 percent (2,744 jobs) and retail trade 30 percent (3,089 jobs). The total payroll declined by 21 percent (\$101 million) between 1998 and 2008. The largest losses (in terms of dollar value) happened in manufacturing 63 percent (\$89 million), transportation & warehousing 68 percent (\$18 million) and retail trade 29 percent (\$12.9 million). There were gains of about 54 percent (\$7 million) in payroll for professional, scientific and technical services. During this period the average monthly earnings of total sectors declined by 8.6 percent (\$236). The largest loss (in terms of dollar value) accounted for manufacturing 22.5 percent (\$973). The largest gains occurred in professional, scientific and technical services 22.7 percent (\$619) and utilities 18.5 percent (\$786).

The structure of the economy in the Delaware County (and the Midwest in general) is changing. Manufacturing employment has declined and growth in other sectors has not replaced lost manufacturing jobs. The most recent recession has exacerbated the effects of a weakened labor market. The result is an overall decline in the number of jobs, real payroll and average earnings over the past decade. Professional/scientific/technical services, wholesale trade, and finance/insurance have fared better than other sectors in terms of both employment and earnings. These trends indicate that the Delaware County economy is transitioning from a manufacturing to a service based economy (again following national trends). Because wages tend to be lower in the service sector compared to manufacturing, this change has implications for government funding (decreasing local tax revenue) and ultimately government funded local amenities and the quality of life in Delaware County. Investigating these linkages is left for future analysis.

**A CLOSER LOOK:
TOTAL PERCENT CHANGE
(1998-2008)**

Change in total employment	-18.64%
Change in total payroll	-21.09%
Change in total avg. monthly earnings	-8.57%

CENTER FOR BUSINESS AND ECONOMIC RESEARCH **POLICY BRIEF**

About the Center:

The Center for Business and Economic Research is a premier economic policy and forecasting research center housed within the Miller College of Business at Ball State University. The Center publishes the American Journal of Business—a peer-reviewed scholarly journal—and the Indiana Business Bulletin—a Web site with weekly commentary, analysis and data on economic, business and demographic trends in Indiana. Research in the Center encompasses health care, public finance, regional economics, transportation and energy sector studies. In addition to research, the Center hosts the Executive Economic Exchange in Indianapolis four times a year, and also serves as the forecasting element in the Muncie area—hosting five state and federal economic forecasting roundtables.

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