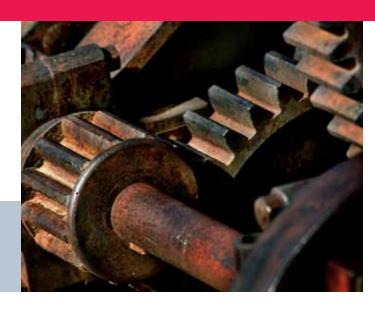
## **Manufacturing Trends:**

Madison County, Ind., 1973 - 2009

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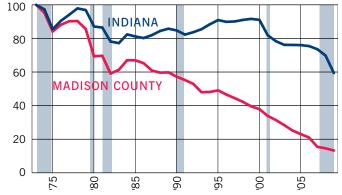
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During the past four decades, more than half of the 92 counties in Indiana have experienced a significant decline of jobs in the manufacturing sector. Madison County is ranked third among the most affected counties in manufacturing employment loss (after Lake and Marion counties). This business brief investigates the changes in employment and size of establishments for each manufacturing sector<sup>1</sup> during that period.

In 1973, the state of Indiana and Madison County enjoyed their highest manufacturing employment with 764,289 jobs and 28,879 jobs<sup>2</sup> respectively. Figure 1 compares the manufacturing employment trend index<sup>3</sup> (100 = highest employment) of

FIGURE 1: State & County Manufacturing Employment Trends Index, 1973-2009

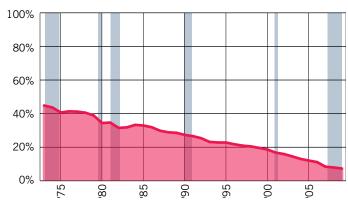


Note: Shaded columns indicate a period of recession as reported by the National Bureau of Economic Research.

Madison County and the state. The graph illustrates an increasing divergence between the state and county trends. Between 1991 and 1994, state manufacturing employment increased by 7.5 percent and then stabilized until 2000. On the other hand, Madison County lost 12.8 percent of its jobs during early 1990s and continued to decline.

The manufacturing sector's share of total employment (all sectors) for Madison County between 1973 and 2009 is shown in Figure 2. As reflected in the graph, manufacturing employment share declined steadily from 1973 to 2009, except for a slight increase during the early part of the 1980s. By 2009,

## FIGURE 2: Manufacturing Sector's Share of Total County Employment, 1973-2009



Note: Shaded columns indicate a period of recession as reported by the National Bureau of Economic Research.

- 1. Manufacturing employment data from 1973 to 2009 was taken from BEA's regional data.
- 2. Madison County manufacturing employment, according to REIS and Census of Manufacturers: 26,848 (1972); 28,762 (1969); 28,400 (1967); 26,200 (1963); 23,467 (1958); 25,725 (1954) and 26,048 (1947).
- 3. The state and county manufacturing employment numbers for each year (from 1973 to 2009) were compared to employment in the respective highest employment year to obtain the index. For example: In 2009, Indiana had 453,904 manufacturing jobs and Madison County had 3,835 jobs. The index for the state in 2009 was 59.4 (i.e., 100 x 453,904 ÷ 764,289). Similarly, the index for Madison County was 13.3 (i.e., 100 x 3,835 ÷ 28,879).

TABLE 1: No. of Establishments in Each Manufacturing Sector in Madison County, 1973 & 2009

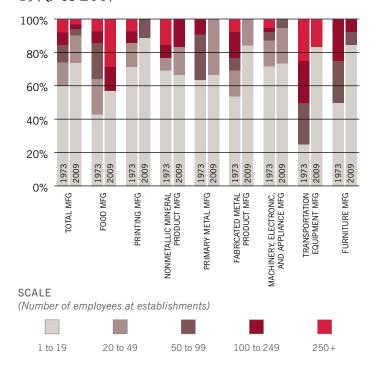
Industry Code Description (NAICS Code Description)	Total Establishments		
	1973	2009	Difference
Manufacturing (31, all manufacturing sectors)	124	103	-21
Food mfg. (311)	14	7	-7
Beverage and tobacco product mfg. (312)	0	1	1
Textile mills & products (313 & 314)	0	2	2
Apparel mfg. (315)	0	2	2
Wood product mfg. (321)	0	5	5
Paper mfg. (322)	2	1	-1
Printing and related support activities (323)	14	9	-5
Chemical mfg. (325)	0	2	2
Plastics and rubber products mfg. (326)	4	2	-2
Nonmetallic mineral product mfg. (327)	13	6	-7
Primary metal mfg. (331)	11	3	-8
Fabricated metal product mfg. (332)	13	19	6
Machinery, electronic product, computer, electrical appliances and components mfg. (333, 334 & 335)	39	19	-20
Transportation equipment mfg. (336)	4	6	2
Furniture and related product mfg. (337)	4	13	9
Miscellaneous mfg. (339)	6	6	0

Madison County had lost 12,179 jobs overall (for all industry sectors), a decrease of 18.9 percent from 1973. The manufacturing sector experienced a loss of 25,044 jobs (down 86.7 percent) during that period. Employment gains in other sectors offset this huge decline in manufacturing by only 51.4 percent. Within the manufacturing sectors, the highest job losses4 were found in the fabricated metal product sector (NAICS 332).

Table 1 compares the number of establishments for each manufacturing sector<sup>5</sup> during 1973 and 2009. Machinery, electronic products, computer, electrical appliances/components sector and food sectors experienced the greatest reduction in number of establishments. The furniture and related product sector gained the most establishments. Overall, the number of manufacturing establishments decreased by 21.

Figure 3 reflects the shift in establishment size across major manufacturing sectors between 1973 and 2009. Overall, there was an increase of 16.1 percent in number of smaller establishments (1 to 49 employees) during that period. Though firms in food manufacturing (NAICS 311) expanded their employment size to more than 500 employees, downsizing and/or shutdowns

FIGURE 3: Comparison of Establishment Sizes Across Manufacturing Sectors in Madison County, 1973 & 2007



were seen in other major sectors, especially in nonmetallic mineral products (NAICS 327), fabricated metal product (NAICS 332) and machinery, electronic products, computer, electrical appliances and components sector (NAICS 333, 334 and 335).

These trends indicate that Madison County's manufacturing employment is consistently declining. On the other hand, there are employment gains in other industries such as services, construction transportation and wholesale trade. These finding indicate potential employment opportunities for those willing to relocate or shift from manufacturing to other employment sectors. The number of manufacturing establishments also decreased (by a negligible amount) with a shift in the composition of establishments both by industry sector and size. There have been decreases in the number of large establishments and increases in the share of small establishments. This is a trend throughout Indiana, which may signal the development of a more nimble manufacturing sector in the state.

<sup>4.</sup> BEA's regional data does not have employment data for each manufacturing sector. Employment and establishment data for each sector is available in County Business Patterns (CBP) for the year 1973, but some of the sectors withheld employment information. We then estimated the manufacturing sector that contributed the most to manufacturing employment by adjusting the 1973 CBP employment numbers to the 1973 REIS total manufacturing numbers and then finding the largest difference between 2009 employment and the adjusted 1973 number for each sector.

<sup>5.</sup> Establishment data was taken from County Business Patterns. Manufacturing sectors classified according to NAICS code (sector 31). For 1973 data, the manufacturing SIC codes (sectors 20 to 39) were matched to the equivalent of NAICS codes.



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## CENTER FOR BUSINESS AND ECONOMIC RESEARCH BUSINESS BRIEF



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