

IN the Spotlight:

A View from Purdue: Indiana Manufacturing

Manufacturing has traditionally been an important source of employment and income in the Indiana economy. In 1999, following a long-term trend, Indiana held the distinction of having the highest percentage in the nation of its gross state product from manufacturing (31%). Kentucky was second with 28 percent (see Figure 1).

Our five largest manufacturing industries accounted for 63 percent of manufacturing gross state product in 1999. Four of these industries have shown growth since 1995. Motor vehicles and equipment showed the highest rate of growth (see Figure 2).

Indiana also had the largest percent in the nation of its workforce involved in manufacturing (see Figure 3). In 2000, 19 percent—697,610 of the state’s 3,691,768 jobs—were in the manufacturing sector.

Although dominant in the state economy, manufacturing has not been Indiana’s most rapidly growing sector. Indiana’s services sector has followed a national trend of high growth since the 1980s. All other Indiana sectors demonstrated more moderate growth. During the 1990s, manufacturing employment was relatively stable, adding 68,276 jobs; the service and retail sectors

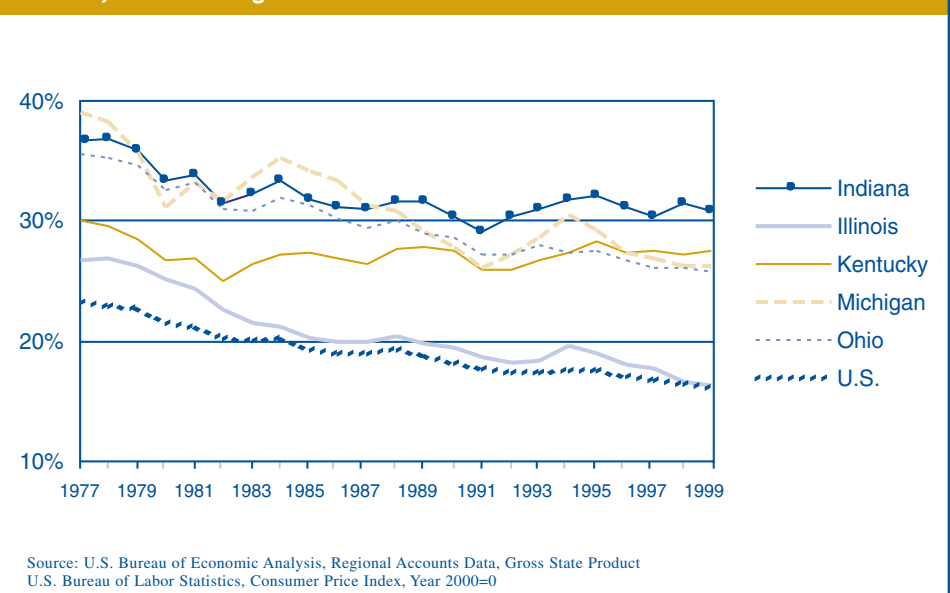
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Indiana Employment Snapshot

Figure 1: Manufacturing as a Percent of Gross State Product, 1977-1999

Indiana, Surrounding States and the U.S.



**Indiana
Unemployment
Rate for
May 2002:
4.8%**

IN the Spotlight

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Figure 2: Indiana Manufacturing Sectors by Contribution to Gross State Product

Motor vehicles and equipment showed the largest growth rate

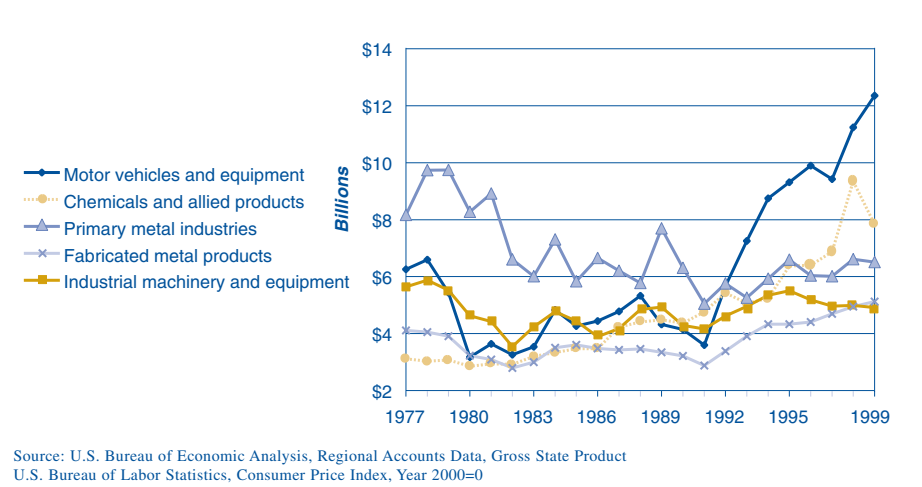
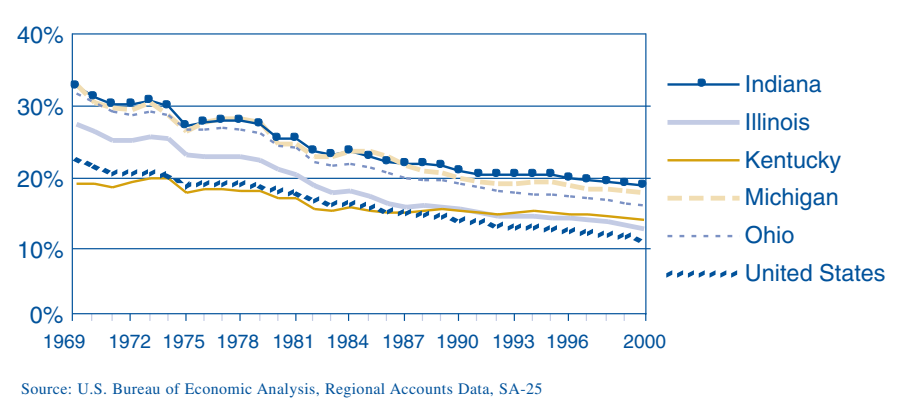


Figure 3: Manufacturing Employment as a Percent of Total Employment

Indiana, Surrounding States and the U.S., 1969-2000



added 352,730 jobs during the same time period (see Figure 4).

Wages and Earnings

Economic well-being can be reflected in terms of wages. While the services sector added a substantial number of new jobs in the last two decades, it was not among the five highest paying employment sectors of Indiana in 2000 (see Figure 5).

The historical importance of manufacturing can be seen in wages: the average wage in manufacturing in 2000 was \$42,371, or 157 percent of the average non-manufacturing wage of \$26,900 (see Figure 6).

Manufacturing's higher average pay is reflected in per capita disposable income. A standard of living index based upon per capita disposable income is shown in Figure 7. On aver-

age, Indiana has maintained its share of U.S. manufacturing wages and per capita disposable income.

Total Indiana manufacturing wage and salary payments comprised 29 percent (\$33.2 billion of \$116 billion) of Indiana earnings by place of work in 2000. The highest average manufacturing pay was in the chemicals and allied products sector which includes pharmaceuticals (see Table 1). The lowest wage was in apparel and other textile products.

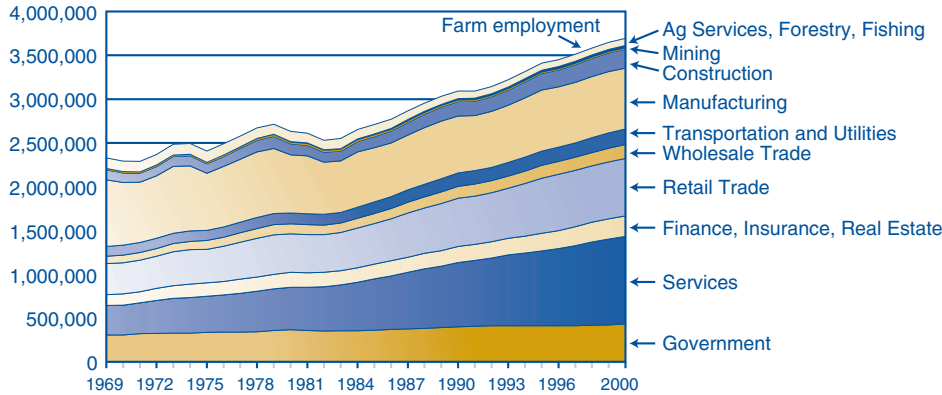
Sustaining the Sector

High wages and employment make sustaining the manufacturing sector a key issue for the economic future of Indiana. As Indiana emerges from recession, the manufacturing sector remains challenged by the demands of international competition and an evolving economy. Regardless of these challenges, the Bureau of Labor Statistics forecasts that manufacturing will maintain its dominance on the Indiana economy through the end of the decade.

In preparing for the future, Indiana needs to find ways to build on traditional strengths in manufacturing, and stimulate high value-added activity in more industries. Recent studies by the Battelle Memorial Institute and DRI/McGraw Hill¹ recommend encouraging the growth of "clusters" (agglomerations of related industries) and establishing policies that encourage value-added employment. The studies also suggest improvements in the quality of primary education, the business environment, vocational training, retention of high-tech graduates and

Figure 4: Indiana Employment Proportions by Industry, 1969-2000

The services sector followed a national trend of high growth



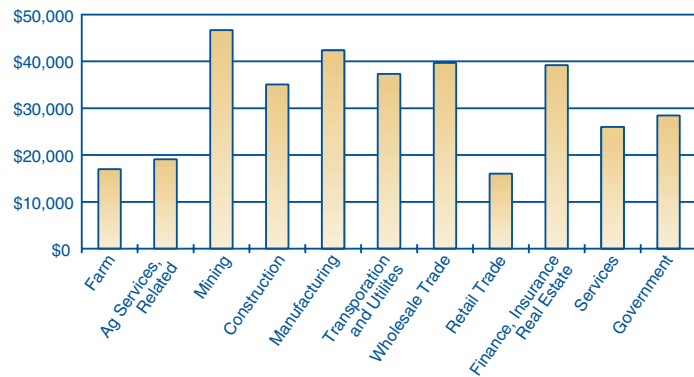
Source: U.S. Bureau of Economic Analysis, Regional Accounts Data, SA-25

During the 1990s, manufacturing employment was relatively stable

Total manufacturing wage and salary payments comprised 29% of Indiana earnings by place of work in 2000

Figure 5: Indiana Average Annual Wage by Industry Sector, 2000

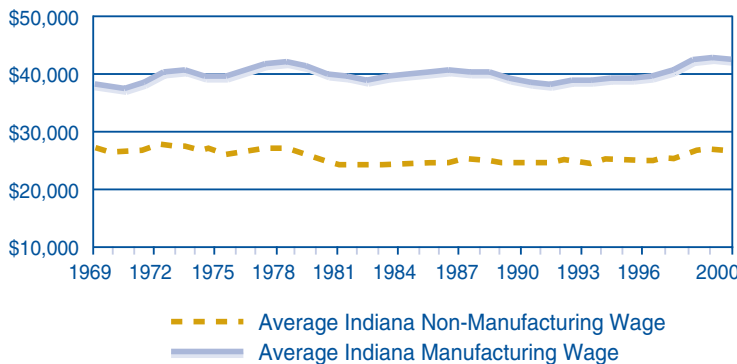
The average manufacturing wage was \$42,371 in 2000



Source: U.S. Bureau of Economic Analysis, Regional Accounts Data, SA-27 and SA-07

Figure 6: Manufacturing and Non-Manufacturing Wages

On average, manufacturing earnings are 157% higher



Source: U.S. Bureau of Economic Analysis, Regional Accounts Data, SA-27 and SA-07
U.S. Bureau of Labor Statistics, Consumer Price Index, Year 2000=0

The importance of manufacturing employment can be seen in consistently higher wages

interaction between higher education and industry. A stronger link to higher education's research innovations and expertise would benefit Indiana industries and, perhaps, increase career opportunities in the state.

To increase the synergy and growth of industry clusters, collaboration could be encouraged by organizing trade groups, local and cooperative purchasing arrangements, and tracking the availability of related support services such as data processing, programming and other computer support resources.

As the new economy emerges and work activities become increasingly automated, industry and elected leaders will need to decide whether Indiana should continue to be a powerhouse of manufacturing only or strive to add other high value-added endeavors. The key to success depends upon improving the quality of education, increasing the interaction between educational institutions and industry, a shift in business thinking to collaboration and co-opetition and encouraging the growth and liquidity of industrial clusters.

—Kevin T. McNamara and David L. Brown,
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Footnote

1. Battelle Memorial Institute: Indiana's Pillar Industries for 21st Century Midwestern Pre-Eminence (2000), a study prepared for the Central Indiana Corporate Partnership. DRI/McGraw-Hill: Blueprint for Economic Growth for Indiana (BEGIN), (1996), prepared for the Indiana Chamber of Commerce.

Figure 7: Manufacturing Wages and Per Capita Disposable Income, 1958-2000

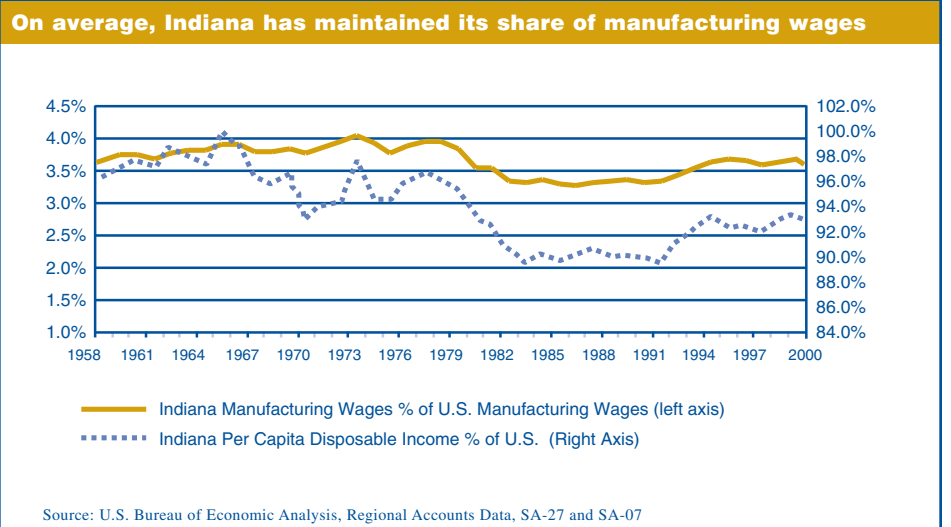


Table 1: Indiana Average Annual Wage

Industry Sector	Average Wage
Chemicals and allied products	\$79,966
Petroleum and coal products	\$55,967
Motor vehicles and equipment	\$51,303
Primary metal industries	\$50,683
Instruments and related products	\$47,774
Other transportation equipment	\$43,837
Industrial machinery and equipment	\$42,621
Electronic and other electric equipment	\$41,248
Stone, clay, and glass products	\$38,980
Paper and allied products	\$37,685
Fabricated metal products	\$35,833
Miscellaneous manufacturing industries	\$34,130
Food and kindred products	\$33,603
Printing and publishing	\$33,568
Rubber and misc. plastics products	\$31,830
Lumber and wood products	\$29,991
Furniture and fixtures	\$29,941
Textile mill products	\$26,906
Apparel and other textile products	\$25,985

Source: U.S. Bureau of Economic Analysis, Regional Accounts Data SA-27 and SA-07