

## The rise and decline of auto parts manufacturing in the Midwest

*Prior to its recent decline, the Midwest auto parts manufacturing industry experienced two distinct periods of employment and wage growth: strong expansion from 1992 to 1995 and modest gains from 1995 to 2000*

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The Midwest region has a long reputation as a hub for the automobile industry in the United States.<sup>1</sup> Although the “Big Three” (General Motors, Ford, and Chrysler) of the auto manufacturing sector garner a great deal of media attention, employment in the complementary auto parts manufacturing sector is roughly three times as large.<sup>2</sup>

The Midwest is the clear leader in the auto parts manufacturing industry, with more than half of the Nation’s auto parts workers employed in the five States (Ohio, Michigan, Indiana, Illinois, and Wisconsin) of the region.<sup>3</sup> The region also has the industry’s highest wages: since 1992, Midwest auto parts producers’ average weekly wages have been at least 30 percent higher than those of their non-Midwest counterparts.<sup>4</sup> The country’s three States with the largest number of auto parts production jobs—Michigan, Ohio, and Indiana—are also located in the Midwest.

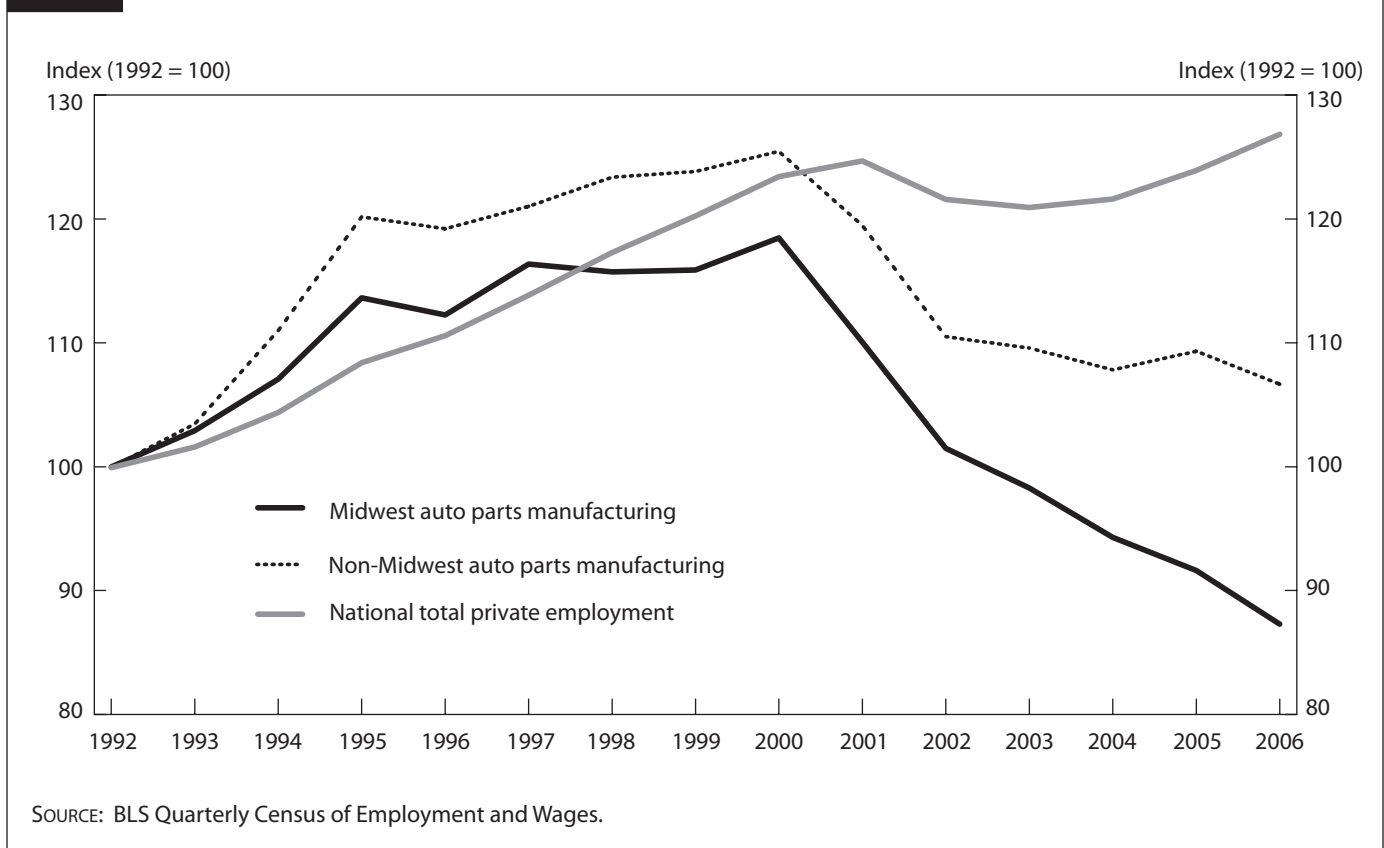
Between 1992 and 2006, the Midwest’s auto parts manufacturing industry lost more than 52,200 jobs, or 12.7 percent, of its employment.<sup>5</sup> This loss was not the result of an ongoing decline; rather it was the sum of three distinct periods. During the first period, 1992 to 1995, both employment and wages experienced a healthy expansion, growing faster than total employment in the private sector, both in the Midwest and nationally.<sup>6</sup> The second period, from 1995 to 2000, was

largely flat, with the industry experiencing modest employment and wage growth at a pace below that of the Nation as a whole. The third period, 2000 to 2006, represented an unabated decline for the industry in the Midwest, with both employment and wages suffering steep declines, erasing the gains from the previous two periods. (See chart 1.)

Using employment and wage data from the Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW) program, this article examines employment and wage trends in the auto parts industry in the Midwest from 1992 to 2006, dividing the data into the three distinct periods mentioned earlier. The annual data were derived from each year’s first quarter statistics. Nominal wages were deflated using the U.S. city average Consumer Price Index. The periods covered include the peaks and troughs of the business cycle and, as such, contain a recession beginning in March of 2001 and ending in November 2001, as well as the subsequent recovery. In addition to discussing the trends in the Midwest region as a whole, the article discusses the auto parts industry’s employment and wage trends in three Midwestern States with the largest employment. Also, the factors potentially affecting the industry’s recent decline, such as the increasingly prevalent foreign sector and domestic competition, are discussed.

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**Chart 1. Indexed employment, selected industries, 1992–2006**



### The growth years: 1992–95

*Employment.* From 1992 to 1995, the Midwest auto parts industry experienced 3 years of continuous growth. Employment increases during this period were driven by increased demand for new domestic cars and light trucks, which rose 20.7 percent between 1992 and 1995.<sup>7</sup> Over the 1992–95 period, employment in the Midwest auto parts manufacturing industry expanded by more than 56,100 jobs, a gain of 13.6 percent. During this same period, total private employment growth in the Midwest was 9.6 percent and national total private employment growth was 8.4 percent.<sup>8</sup> The employment gains of the auto parts industry are even more pronounced when compared with the manufacturing sector as a whole: from 1992 to 1995, employment in the manufacturing sector grew 3.0 percent nationally.<sup>9</sup> In comparison, the Midwest’s manufacturing sector, including the burgeoning auto parts sector, grew 7.2 percent. (See table 1.)

Among the three largest auto parts producing States, Indiana had the fastest growth at 15.4 percent. In terms of net job growth, Michigan was the leader, adding almost 26,600 auto parts producing jobs, a gain of 14.5 percent.

Ohio’s auto parts industry grew by 13.0 percent, adding more than 12,900 jobs.

*Wages.* Average weekly wages in the Midwest auto parts manufacturing industry also experienced robust growth during the 1992–95 period.<sup>10</sup> After being adjusted for inflation, average weekly wages grew by 20.5 percent (from \$733 to \$883).<sup>11</sup> Outside the Midwest, auto parts production wages increased 6.6 percent. (See table 2.) Already the highest in the Nation in 1992, the Midwest’s rapid wage growth widened the wage differential between its auto parts workers and those in the rest of the Nation. By 1995, Midwest auto parts producers were earning 60.6 percent more per week than non-Midwest workers in the same industry.

During the same period, average weekly wages in manufacturing grew 9.1 percent (from \$615 to \$671) in the Midwest and 4.4 percent (from \$574 to \$599) nationally. National average weekly wages across all private industries rose 9.8 percent (from \$478 to \$525).

Among the region’s three leading States, Indiana’s auto parts manufacturers experienced the largest wage growth over the 3-year period, with average weekly pay increasing by 24.2 percent (from \$707 to \$878). Ohio’s weekly

**Table 1. Employment levels in auto parts and other industries, 1992–2006**

[Numbers in thousands]

Region and industry	Employment levels				Net change			Percentage change		
	1992	1995	2000	2006	1992–95	1995–2000	2000–06	1992–95	1995–2000	2000–06
Midwest auto parts manufacturing .....	412.5	468.6	488.5	360.3	56.2	19.8	-128.2	13.6	4.2	-26.2
Non-Midwest auto parts manufacturing .....	282.7	339.7	354.6	301.6	57.0	14.9	-53.0	20.1	4.4	-14.9
Midwest manufacturing ...	3,723.5	3,999.1	4,041.7	3,203.2	267.6	50.6	-838.4	7.2	1.3	-20.7
National manufacturing ...	16,599.1	17,099.9	17,263.9	14,074.8	500.8	164.0	-3,189.1	3.0	1.0	-18.5
Total national private employment .....	86,915.6	94,238.7	107,239.0	110,187.4	7,323.1	13,000.4	2,948.4	8.4	13.8	2.7

SOURCE: BLS Quarterly Census of Employment and Wages.

wage increase was second at 20.3 percent (from \$705 to \$848) and weekly pay for Michigan's auto parts producers increased 18.8 percent (from \$810 to \$962).

### The plateau period: 1995–2000

*Employment.* During the second half of the nineties, employment expansion in the Midwest's auto parts industry slowed substantially. From 1995 to 2000, industry employment growth slowed to 4.2 percent. While the growth rate during this period was below both the industry's robust growth of the early nineties and total national private employment growth from 1995 to 2000 (13.8 percent), it still represented an increase of almost 20,000 jobs. It also outpaced the growth rate in both the regional and national manufacturing sectors: during the 1995 to 2000 period, Midwest manufacturing industry employment increased by 1.3 percent and national manufacturing employment grew by 1.0 percent.

As with the previous period, growth during the plateau period was unevenly distributed across the region's three largest auto parts producing States. Michigan expanded the most with 7.6 percent job growth, while Ohio grew 2.0 percent and Indiana expanded only 0.2 percent.

*Wages.* Average weekly wage growth in the Midwest auto parts industry also slowed during the 1995–2000 period, increasing a moderate 5.0 percent. All related industries reported larger average weekly wage gains. Weekly wages in auto parts outside the Midwest increased 7.3 percent. National and Midwest manufacturing weekly wages rose

15.4 percent and 7.2 percent, respectively, while total private national wages increased 7.6 percent.

Among the three largest auto parts producing States, Michigan led with an 8.7-percent average weekly wage increase. Indiana was second, with average weekly wage gains of 3.4 percent, while Ohio was the only one of the three largest States to experience a decline in its average weekly wages, falling 2.6 percent.

### The decline period: 2000–06

*Employment.* After 2000, a combination of the 2001 recession, foreign competition, domestic relocation, and increased productivity through automation contributed to a decline of jobs in the Midwest auto parts manufacturing sector. From 2000 to 2006, the sector lost more than 128,200 jobs, a decline of 26.2 percent. This decline represents a loss greater than the gain in the 1992–2000 expansion period. While not as severe as the losses in Midwest auto parts production, most related industries also experienced sharp declines during this period. The auto parts sector in other regions of the country lost 14.9 percent of its jobs, while manufacturing employment in the Midwest declined by 20.7 percent and the national manufacturing sector fell 18.5 percent.

The Midwest auto parts industry began its decline before the 2001 recession, losing almost 34,600 or 7.1 percent of its jobs between 2000 and 2001. The national manufacturing sector also declined during this period, losing 2.4 percent of its jobs.<sup>12</sup> In this same period, total private employment increased by 1.0 percent. During the

**Table 2. Real average weekly wage levels in auto parts manufacturing and related industries, 1992–2006**

Region and industry	Average weekly wage (in 1992 dollars)				Percent change		
	1992	1995	2000	2006	1992–95	1995–2000	2000–06
Midwest auto parts manufacturing .....	\$733	\$883	\$927	\$762	20.5	5.0	–17.8
Non-Midwest auto parts manufacturing .....	516	550	590	583	6.6	7.3	–1.2
Midwest manufacturing .....	615	671	719	706	9.1	7.2	–1.8
National manufacturing .....	574	599	691	712	4.4	15.4	3.0
Total national private employment .....	478	525	565	589	9.8	7.6	4.2

SOURCE: BLS Quarterly Census of Employment and Wages.

2001–02 period, which includes the recession, the Midwest auto parts industry declined another 7.8 percent, while total private employment fell 2.5 percent nationally. The subsequent national economic recovery did not help the Midwest auto parts industry. Between 2002 and 2006, the industry suffered additional losses and saw its employment decline 14.0 percent further. Weakness in the manufacturing sector was not unique to the Midwest region during that period. Employment in the manufacturing sector at the national level also declined, falling by 8.2 percent between 2002 and 2006.

The Midwest auto parts production industry's largest decline during the 2000–06 period in terms of both net and percentage loss occurred in Michigan, which lost more than 73,600 jobs, a decline of 32.5 percent. The region's other two leading States also experienced severe losses, with Ohio losing 19.4 percent of its jobs and Indiana jobs falling 22.9 percent.

*Wages.* Average weekly wages in the Midwest's auto parts production industry fell substantially along with employment. During the 2000–06 decline period, the Midwest auto parts industry saw its average weekly wages drop 17.8 percent (from \$927 to \$762). Outside the Midwest, the drop in average weekly wages in auto parts manufacturing was far more restrained, declining only 1.2 percent (from \$590 to \$583). This difference in wage declines greatly reduced the aforementioned wage gap between Midwest auto parts manufacturers and those outside the Midwest. In 2006, average weekly wages in auto parts production in the Midwest were 30.7 percent higher than those in the rest of the country. While still a sizable gap, this was a decided drop from the peak gap of 60.6 percent in 1995.

Among the three largest auto parts producing States, Indiana had the largest average weekly wage decline at 18.0 percent and Ohio was second, with its average weekly auto parts production wages falling 14.3 percent. Michigan, the State with the highest wages in the industry, experienced a decline of 13.9 percent.

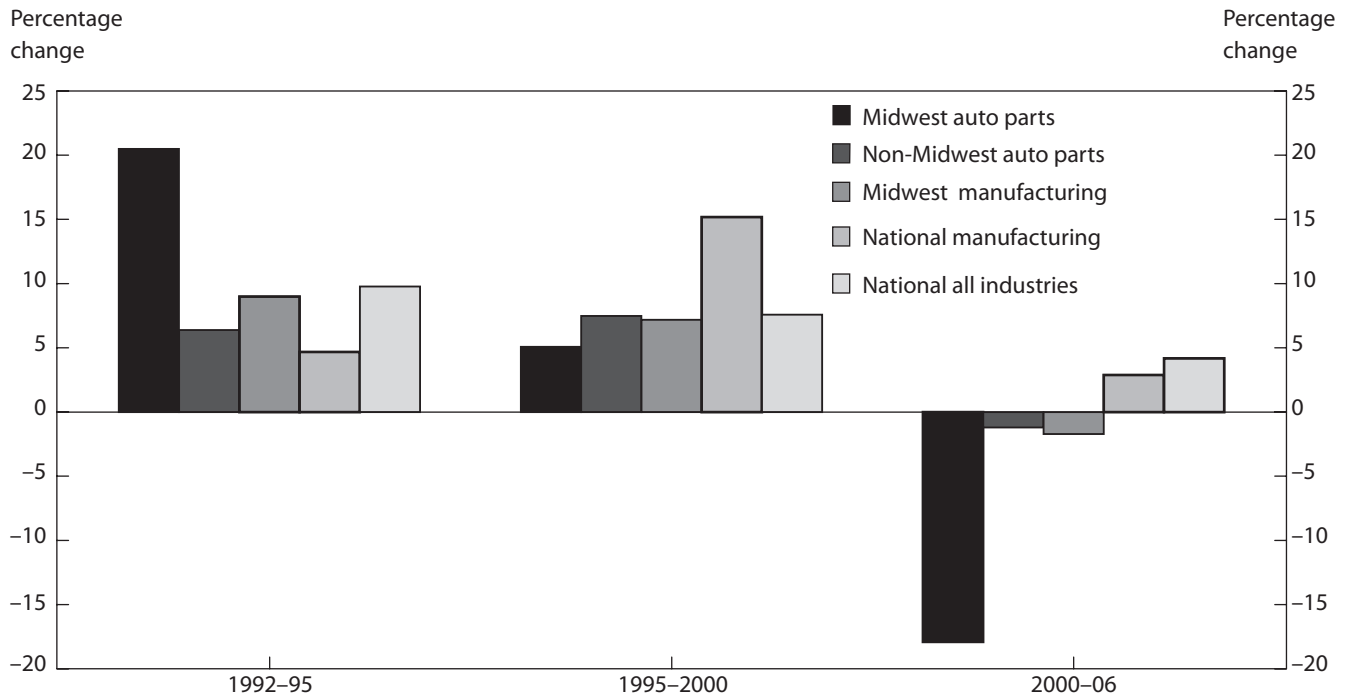
Average weekly wages in the manufacturing sector followed a decidedly different path from those of auto parts manufacturers. During the 2000 to 2006 period, average weekly wages in manufacturing in the Midwest dropped by only 1.8 percent, while average weekly manufacturing wages increased 3.0 percent at the national level. During this period, average weekly wages in all private industries increased 4.2 percent nationally. (See chart 2.)

### Likely causes of job loss

The decline in auto parts manufacturing employment was not due to a decline in the overall demand for new automobiles. Auto purchases during the first half of the 2000 period were well above levels in the nineties and the auto industry's two highest demand years have occurred since 2000.<sup>13</sup> Several other factors, however, may have contributed to the employment decline of the Midwest auto parts industry.

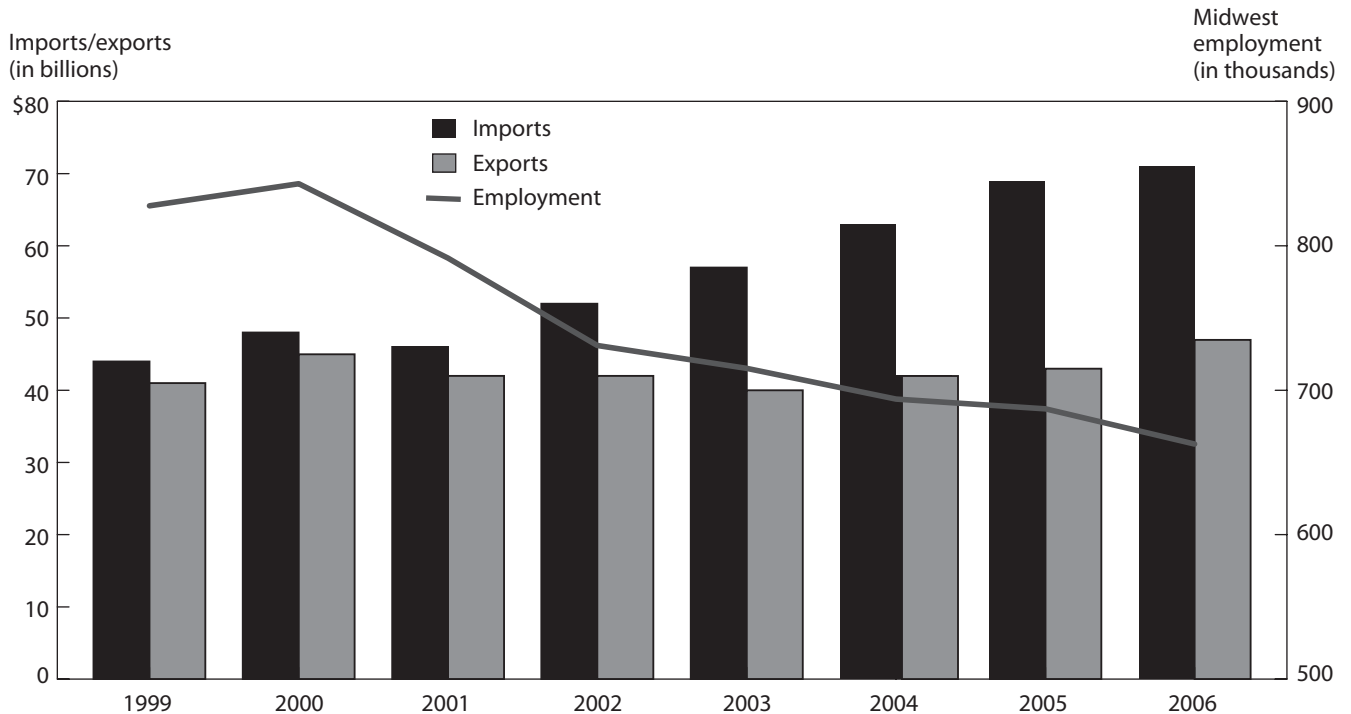
The first and most often mentioned cause is the increasing presence of the foreign sector. In 2000, auto parts imports to the United States totaled \$48 billion, about 7 percent more than its export level of \$45 billion. By 2006, this gap had increased to 51 percent (\$71 billion in imports versus \$47 billion in exports).<sup>14</sup> Midwest employment in auto parts manufacturing declined during this same period. (See chart 3.)

**Chart 2. Change in real average weekly wage in the auto parts manufacturing and related industries, 1992–2006**



SOURCE: BLS Quarterly Census of Employment and Wages.

**Chart 3. Imports, exports, and employment in the auto parts manufacturing industry, 1999–2006**



SOURCE: BLS Quarterly Census of Employment and Wages and U.S. International Trade Commission.

In addition to increased imports from historical players in the auto parts industry such as Canada and Japan, other countries also expanded their market share or entered the auto parts market. The most notable case is China, which until recently had only a very small presence in auto parts manufacturing.<sup>15</sup>

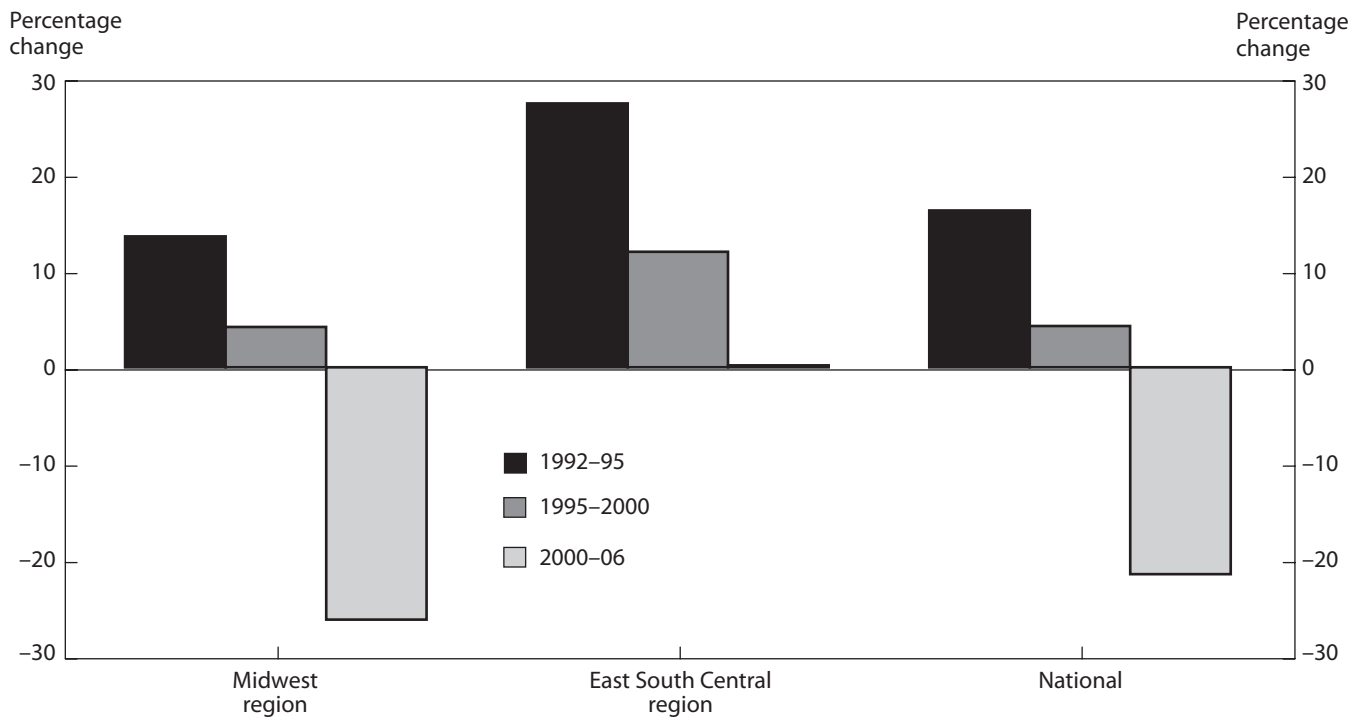
In addition to the increased foreign presence, Midwest auto parts producers also faced expanding domestic competition. While the largest domestic auto companies still tend to get the bulk of their parts from the Midwest, an increasing number of foreign-owned companies are locating auto parts plants in other regions. This can be seen most clearly in recent developments in the neighboring East South Central region (Alabama, Kentucky, Tennessee, and Mississippi) an area that offered a central location similar to that of the Midwest, but as of 2000, had auto parts manufacturing wages that were 38 percent lower.<sup>16</sup> States in the East South Central region also offered new companies generous tax benefits.<sup>17</sup> While other regions were experiencing declines during the 2000–06 period, the East South Central region was able to maintain its employment level.<sup>18</sup> (See chart 4.)

This stability in the East South Central region, coupled with the Midwest’s declines has further delineated the northern and southern components of what researchers have dubbed the “auto corridor.”<sup>19</sup> Collectively, these 12 States accounted for about 75 percent of the Nation’s auto parts jobs throughout the 2000–06 period. During this time, the southern corridor’s share of national auto parts employment (which mostly consists of production for foreign-owned companies) increased from 17 percent to 21 percent and the share of the northern corridor (which primarily produces for domestic companies) dropped from 58 percent to 54 percent.<sup>20</sup>

Less obvious than the above discussed issues, but still a factor possibly affecting auto parts employment, was increased automation and a resulting increase in productivity. From 2000 to 2005 (the last year for which data are available), output per work hour in auto parts production rose by 28.6 percent.<sup>21</sup> This increased output per hour has grown faster than demand for new cars and, therefore, reduced the need for workers.<sup>22</sup>

This combination of increased productivity and decreased employment was not unique to the auto parts

**Chart 4. Percentage change in auto parts production employment, selected periods, 1992–2006**



SOURCE: BLS Quarterly Census of Employment and Wages.



production industry. From 2000 to 2006, productivity in the national manufacturing industry increased 27.1 percent and employment (as mentioned above) fell 18.5 percent.<sup>23</sup>

OVER THE COURSE OF THE 14-YEAR STUDY, 1992 to 2006, the Midwest auto parts industry shed more than 52,200 jobs or 12.7 percent of its total workforce, while its real wages increased by 4.0 percent. Among the region's leading States, Michigan lost the most jobs (almost 31,000) and also had the highest percentage decline at 16.9 percent. The long-term losses in the region's other leading States were less than in Michigan, but still were substantial, with Indiana losing almost 9,000 (10.8 percent) of its auto parts jobs and Ohio losing almost 7,000 (7.1 percent).

Outside the Midwest, the auto parts industry added more than 18,900 new jobs, making for a modest 6.7-percent gain over the 14-year period. Real wages in the non-Midwest auto parts industry also increased, gaining 13.0 percent.

During the same 1992–2006 period, total private Midwest manufacturing employment declined by more than 520,000, or 14.0 percent. National manufacturing employment decreased by about 2.5 million, or 15.2 percent. Conversely, real manufacturing wages grew both in the Midwest and nationally, increasing 14.8 percent and 24.0 percent, respectively. Nationwide, total private employment increased 26.8 percent from 1992 to 2006 while real wages grew 23.2 percent. □

## Notes

<sup>1</sup> For the purposes of this article “Midwest region” is the East North Central Division as specified by the U.S. Census Bureau: Ohio, Michigan, Indiana, Illinois, and Wisconsin. The geographic areas referred to as “regions” in this article are defined as “divisions” by the Census Bureau.

<sup>2</sup> The auto manufacturing sector is classified in the North American Industry Classification System (NAICS) as 3361; auto parts manufacturing is classified as NAICS 3363.

For an example of a media account, see “Behind Ford’s Scary \$12.7 billion loss,” *Fortune Magazine*, January 26, 2007. On the Internet at [http://money.cnn.com/2007/01/26/news/companies/plugged\\_in\\_taylor\\_ford.fortune/index.htm](http://money.cnn.com/2007/01/26/news/companies/plugged_in_taylor_ford.fortune/index.htm) (visited May 8, 2007).

The 3 to 1 ratio held true throughout the study period of this article. According to the BLS Quarterly Census of Employment and Wages (QCEW), in 1992, there were 130,446 auto manufacturing jobs and 414,474 auto parts manufacturing jobs. In 2006, there were 108,316 auto manufacturing jobs in the Midwest and 360,267 auto parts jobs.

<sup>3</sup> The “more than half” statement held true throughout the study, with 59 percent of the Nation’s auto parts producers in the Midwest in 1992 and 54 percent in 2006.

<sup>4</sup> “Non-Midwest” or “outside of the Midwest” refers to the 45 non-Midwest States and the District of Columbia.

<sup>5</sup> 1992 was chosen as the beginning year for the study because of the availability of industry-specific data.

<sup>6</sup> Total private employment in this article refers to covered employment from the QCEW program, excluding government employment.

<sup>7</sup> Sales for domestically-produced vehicles from domestically-owned companies in 1992 were 9,268,000 and rose to 11,193,000 in 1995. See *Ward’s 2005 Automotive Handbook*, Ward’s Communication, 2005.

<sup>8</sup> Data are from the BLS Quarterly Census of Employment and Wages.

<sup>9</sup> *Ibid.*

<sup>10</sup> Wage data used in this article are average weekly wages from the BLS Quarterly Census of Employment and Wages, 1992–2006.

<sup>11</sup> Wage data used were deflated using the U.S. all city Consumer Price Index for all Urban Consumers (CPI-U). All wages are in 1992 dollars.

<sup>12</sup> For a more complete analysis of the manufacturing’s decline before and during the recession period, see David S. Langdon, Terence M. McMenmin, and Thomas J. Krolak, “U.S. labor market in 2001: economy enters a recession,” *Monthly Labor Review*, February 2002, pp. 3–33.

<sup>13</sup> The auto industry’s highest demand was 17.8 million in 2000 and 17.5 million in 2001. See *Ward’s 2005 Automotive Handbook*, p. 239.

<sup>14</sup> U.S. International Trade Commission. Data generated on web site as “NAIC–3363: MOTOR VEHICLE PARTS, FAS Value by FAS Value, For ALL Countries.”

<sup>15</sup> Thomas Klier and James Rubenstein, “Competition and trade in the U.S. auto parts sector,” *Chicago Fed Letter*, January 2006.

<sup>16</sup> As of 2000, average weekly wages in the auto parts producing industry were \$928 in the Midwest and \$576 in the East South Central region.

<sup>17</sup> “New Directions for the Automotive Industry,” *Business Facilities*, August 2006. On the Internet at [http://www.businessfacilities.com/bf\\_06\\_08\\_news1.php](http://www.businessfacilities.com/bf_06_08_news1.php).

<sup>18</sup> The region had 94,800 auto parts workers in 2000 and 95,000 in 2006.

<sup>19</sup> The northern portion of the corridor includes the five Midwest States and the Canadian province of Ontario. The southern portion of the corridor includes the four East South Central States as well as Georgia, North Carolina, and South Carolina. Thomas Klier, “Determinants of Supplier Plant Location: Evidence from the Auto Industry,” *Economic Perspectives* (Federal Reserve Bank of Chicago), 3rd quarter, 2005.

<sup>20</sup> Data from BLS Quarterly Census of Employment and Wages. Ontario is not included in the northern corridor figures.

<sup>21</sup> “Labor productivity, output per hour, motor vehicle parts manufacturing,” BLS Series IPUEN3363\_L000.

<sup>22</sup> During the first half of the 2000s, an average of 17,337 autos were sold each year, compared with 15,272 from 1992 to 1999. This is an increase of 13.5 percent. See *Ward’s 2005 Automotive Handbook*.

<sup>23</sup> “Major sector productivity and costs,” BLS Series ID PR530006093. Change is from the first quarter 2000 to first quarter 2006.