

Wages and Employment of Workers in Automobile Manufacturing

By Jeffrey Holt

The 1.1 million¹ workers employed in automobile manufacturing in the United States in 2005 received, on average, a wage that was 11 percent higher than the U.S. average. Autoworkers earned a mean hourly wage of \$20.53, whereas the U.S. mean hourly wage for all occupations across all industries was \$18.21. This wage premium, however, was not evenly distributed across all automobile manufacturing occupations: employees in less skilled occupations were paid more than their counterparts in other industries, while those in highly skilled occupations, such as engineers, were paid less than their counterparts in other industries. This article examines employment and wages in three groups of the automobile manufacturing industry—motor vehicle manufacturing (NAICS 3361), motor vehicle body and trailer manufacturing (NAICS 3362), and motor vehicle parts manufacturing (NAICS 3363)—for various occupations.

Motor vehicle parts manufacturing (NAICS 3363), the largest industry group, accounted for 693,120 workers, or 62 percent of the industry's workforce. The mean hourly wage paid to these workers fell between the other two industry groups at \$19.79. The 256,700 workers in motor vehicle manufacturing (NAICS 3361) were paid the highest mean hourly wage of \$25.03. Finally, motor vehicle body and trailer manufacturing (NAICS 3362) employed the fewest workers in automobile manufacturing and paid the lowest mean hourly wage. This industry group employed 168,840 workers, or 15 percent of the industry's workforce. These workers earned a mean hourly wage of \$16.73. The variation in employment and wages persisted when looking at individual occupations.

Engineering managers accounted for a small percentage of the automobile manufacturing industry with 5,140 workers. Their mean hourly wage of \$46.09 was very high in comparison to the rest of the industry. However, this wage was

lower than the cross-industry mean hourly wage of \$50.71. Engineering managers were an example of workers in higher skilled occupations who received a lower wage in automobile manufacturing than their counterparts in other industries.

The wages and employment of engineering managers fluctuated between the three industry groups. Motor vehicle manufacturing (NAICS 3361) employed a total of 610 engineering managers, earning a mean hourly wage of \$50.36, the highest of the three industry groups. Motor vehicle parts manufacturing (NAICS 3363) employed the largest number of engineering managers with a total of 3,960. These managers earned a mean hourly wage of \$46.18. Motor vehicle body and trailer manufacturing (NAICS 3362) employed the fewest engineering managers and paid the lowest wage. This industry group employed 570 engineering managers and paid a mean hourly wage of \$40.90.

Another well-paying occupation in the automobile manufacturing industry in 2005 was industrial production managers. According to the *Standard Occupational Classification Manual, 2000*, industrial production managers planned, directed, or coordinated the work activities and resources necessary for manufacturing products in accordance with cost, quality, and quantity specifications. As with engineering managers, they represented a small percentage of employment in the automobile manufacturing industry with total employment of 8,270. The wages that they earned were high, in comparison to the rest of the automobile manufacturing industry, with a mean hourly wage of \$38.29. Industrial production managers were another example of workers in a higher skilled position earning a lower wage in the automobile industry than across all industries. As mentioned, their mean hourly wage in automobile manufacturing was \$38.29, whereas in other industries, their mean hourly wage was slightly higher at \$39.41.

A more pronounced variation in wages and employment was present depending on which industry group employed industrial production managers. The industry group that paid the highest wages for this occupation was motor vehicle manufacturing (NAICS 3361). The 1,550 workers in this group earned a mean hourly wage of \$41.67. Motor vehicle parts

¹ This figure does not include company headquarters, sales, or distribution centers. This article was written with data collected in May 2005 by the Occupational Employment Statistics program.

manufacturing (NAICS 3363) employed the most industrial production managers with a total of 5,490. These managers earned a mean hourly wage of \$38.31. Finally, motor vehicle body and trailer manufacturing (NAICS 3362) employed the fewest industrial production managers and paid the lowest mean hourly wage. These 1,230 managers earned a mean hourly wage of \$33.94.

An integral part of automobile manufacturing is the production of the vehicle's engine. In 2005, the automobile manufacturing industry employed 16,570 engine and other machine assemblers who earned a mean hourly wage of \$19.51. This wage surpassed the mean hourly wage of \$17.38 earned by engine and other machine assemblers who worked in other industries.

Another large employer of engine and other machine assemblers was agriculture, construction, and mining machinery manufacturing (NAICS 333100), which paid a mean hourly wage of \$16.11. Other general purpose machinery manufacturing (NAICS 333900) also employed a large number of engine and other machine assemblers and paid a mean hourly wage of \$15.04. This was an example of a lower skilled, lower paid occupation that received higher wages in the automobile manufacturing industry than in other industries.

In 2005, motor vehicle manufacturing (NAICS 3361) was the largest employer of engine and other machine assemblers with a total of 8,250 people employed. These workers were paid higher wages than their counterparts in the other two industry groups with a mean hourly wage of \$21.36. Motor vehicle parts manufacturing (NAICS 3363) employed 7,590 engine and other machine assemblers and paid a mean hourly wage of \$17.98. Finally, motor vehicle body and trailer manufacturing (NAICS 3362) employed the fewest engine and other machine assemblers and, also, paid the lowest mean hourly wage. There were 730 engine and other machine assemblers working in this industry group who earned a mean hourly wage of \$14.47, in this case, less than the cross-industry average.

Employment and wages for engine and other machine assemblers varied dramatically by State. Kansas paid the highest mean hourly wage of \$22.61, while Nebraska paid the lowest mean hourly wage of \$11.04. Ohio was the largest employer of engine and other machine assemblers with 3,360 people employed, and Iowa employed the highest concentration of these workers with a total of 2,020.

Welders, cutters, solderers, and brazers made up roughly 3 percent of the total automobile manufacturing employment with 36,490 workers. They earned a cross-industry group mean hourly wage of \$15.72. As seen previously in different occupations, employment and wages for welders, cutters, solderers, and brazers can vary widely across industry groups. Motor vehicle manufacturing (NAICS 3361) employed the fewest of these workers with an employment count of 3,250 yet paid the highest mean hourly wage of \$20.65. Motor vehicle body and trailer manufacturing (NAICS 3362) employed the highest number of welders, cutters, solderers, and

brazers, with a total of 18,650. This industry group also paid the lowest mean hourly wage, \$13.77. Finally, motor vehicle parts manufacturing (NAICS 3363) employed 14,590 welders, cutters, solderers, and brazers and paid a mean hourly wage of \$17.11.

The largest occupation by employment in the automobile manufacturing industry in 2005 was team assemblers. Team assemblers accounted for 211,100 workers, or roughly 19 percent of total industry employment. Team assemblers working in the automobile manufacturing industry earned a much higher wage than their counterparts working in other industries. The mean hourly automobile industry wage for these workers was \$15.31, roughly 18 percent higher than the cross-industry mean hourly wage of \$12.50.

Motor vehicle manufacturing (NAICS 3361) employed 60,530 team assemblers and paid the highest mean hourly wage, \$19.98. Motor vehicle parts manufacturing employed the most team assemblers with a total of 107,740, while motor vehicle body and trailer manufacturing (NAICS 3362) employed the fewest assemblers with a total of 42,830. The wage level for team assemblers did not vary significantly between motor vehicle body and trailer manufacturing and motor vehicle parts manufacturing; however, it was significantly lower than motor vehicle manufacturing.

The mean hourly wage and employment counts for team assemblers varied widely by State. Delaware paid the highest wage with a mean hourly wage of \$17.56, while Michigan placed second on the list paying a mean hourly wage of \$14.50 and employing a total of 54,110. California employed the most team assemblers with 95,710 of these workers.

Some occupations had a greater dispersion of wages than others. For instance, the mean hourly wage for electricians fluctuated by as much as \$11.18 between the three industry groups. Conversely, the mean hourly wage for helpers—production workers as well as fiberglass laminators and fabricators did not vary significantly between the three industry groups.

Employment concentration between industry groups varied widely by occupation in 2005. Employment for computer-controlled machine tool operators, metal and plastic, was heavily weighted towards one industry group, motor vehicle parts manufacturing, which employed 14,710 of these workers, or 91 percent of their total in the automobile manufacturing industry. Similarly, employment of electrical and electronic equipment assemblers was not equally divided between industry groups. Motor vehicle parts manufacturing (NAICS 3363) accounted for 8,790 workers, or 88 percent of electrical and electronic equipment assemblers' employment in the automobile manufacturing industry. Employment for industrial engineering technicians was also similarly distributed. Motor vehicle parts manufacturing (NAICS 3363) employed 4,140 technicians, or 82 percent of the auto manufacturing workers in this occupation.

Variations existed in the employment and wages of auto-workers across the three industry groups as well as in comparison to cross-industry employment and wages. On average,

workers in the automobile manufacturing industry earned a wage 11 percent higher than workers doing the same job in other industries. However, this increase did not extend to all occupations in the industry. Higher skilled occupations were often paid less than their cross-industry counterparts, while

lower skilled occupations received a higher wage than their counterparts in other industries. Mean wages also varied, sometimes dramatically, in the same occupation across different industry groups. Likewise, employment fluctuations were very common within the three industry groups.