



Manufacturing Low Pay:

Declining Wages in the Jobs That Built
America's Middle Class

Catherine Ruckelshaus & Sarah Leberstein

NOVEMBER 2014

Contents

Executive Summary	1
Introduction	2
1. Communities are racing to create “good jobs in manufacturing”	3
2. “Onshoring” has sparked a resurgence of U.S. manufacturing.	5
3. Manufacturing wages are in decline	6
4. Case Study: The changing nature of automotive work.	9
5. Heavy reliance on staffing agencies obscures much deeper problems in manufacturing.	13
Conclusion	15
Endnotes.	16

Acknowledgements

NELP thanks the Public Welfare Foundation, the Kellogg Foundation, the Ford Foundation, and the Surdna Foundation for their support of this work. We also thank the Center for Economic and Policy Research for providing data research and analysis for this report.

About NELP

For more than 45 years, the National Employment Law Project has worked to restore the promise of economic opportunity for working families across America. In partnership with grassroots and national allies, NELP promotes policies to create good jobs, enforce hard-won workplace rights, and help unemployed workers regain their economic footing. For more information, visit us at www.nelp.org.

Executive Summary

Americans perceive manufacturing jobs as “good jobs.”

> Nine out of ten Americans believe that a strong manufacturing base is very important to our country’s standard of living, according to a poll conducted by the consulting firm Deloitte for the Manufacturing Institute. When asked what type of facility they would support to bring jobs to their community, a manufacturing plant was at the top of the list.

Manufacturing wages now rank in the bottom half of all jobs in the United States.

> While in the past, manufacturing workers earned a wage significantly higher than the U.S. average, by 2013 the average factory worker made 7.7 percent below the median wage for all occupations.

The perception that manufacturing jobs are highly paid disguises how many workers are stuck at the bottom.

> Today, more than 600,000 manufacturing workers make just \$9.60 per hour or less. More than 1.5 million manufacturing workers—one out of every four—make \$11.91 or less.

Manufacturing wages are not even keeping up with inflation.

> Real wages for manufacturing workers declined by 4.4 percent from 2003 to 2013—almost three times faster than for workers as a whole.

In the largest segment of the manufacturing base—automotive—wages have declined even faster.

> Real wages for auto parts workers, who now account for three of every four autoworker jobs, fell by nearly 14 percent from 2003 to 2013—three times faster than for manufacturing as a whole, and nine times faster than the decline for all occupations.

> The growth in the number of auto parts jobs is cause for concern, because the typical parts worker makes one-third less than the typical auto assembly worker, and puts downward pressure on the higher assembly wages.

There has been a resurgence in the number of auto industry jobs since the economic crisis peaked in 2009.

> The auto industry has added nearly 350,000 jobs and invested \$38 billion in U.S. facilities since 2009, which indicates a long-term commitment to building vehicles here. As long as vehicles are assembled in the United States, the economic benefits of a just-in-time manufacturing base ensures that jobs at many parts suppliers are also likely to remain in the country, even if wages rise.

New jobs created in the auto sector are worse than the ones we lost.

> In 5 of the 10 “Auto Alley” states—Michigan, Indiana, Ohio, South Carolina, and Tennessee—new hires at auto parts plants are paid roughly one-quarter less than the other auto parts workers in the state.

> In 6 of the 10 Auto Alley states—Alabama, Mississippi, Indiana, Ohio, Michigan, and Illinois—auto parts workers saw real monthly earnings decline between 2001 and 2013. Alabama saw the steepest decline—24 percent—over that period.

Heavy reliance on temporary workers hides even bigger declines in manufacturing wages.

> About 14 percent of auto parts workers are employed by staffing agencies today. Wages for these workers are lower than for direct-hire parts workers and are *not* included in the official industry-specific wage data cited above.

> Estimates based on U.S. Census Bureau data, however, indicate that auto parts workers placed by staffing agencies make, on average, 29 percent less than those employed directly by auto parts manufacturers.

Introduction

Politicians, economists, and other promoters tout increased investment by manufacturers, the benefits of direct and “value added” industry cluster jobs flowing from manufacturing plants, and the overall economic boost that manufacturing jobs bring to local economies. This narrative creates a sometimes-intense competition among states for manufacturers in the form of subsidies and tax breaks for the perceived benefits. And while the manufacturing sector has been resurging in the last few years, growing by 4.3 percent between 2010 and 2012, the jobs that are returning are not the ones that were lost: wages are lower, the jobs are increasingly temporary, and the promised benefits have yet to be realized.

This report will trace some of the drivers of this anemic rebound in manufacturing and its largest sector, auto manufacturing. “Onshoring” of jobs by manufacturers is on the rise in the United States; jobs are rebounding here due to a combination of a wage convergence between domestic and international jobs and aggressive supports from U.S. states. At the same time, the decline in relative wages in the manufacturing sector is striking: in the last decades, wages in the sector have fallen behind private-sector pay, so that wages for production workers in manufacturing are now more than 4.0 percent less than the private-sector average, and they continue to decline.

While the manufacturing sector has grown in recent years, wages are lower, the jobs are increasingly temporary, and promised benefits have yet to be realized.

Auto manufacturing trends track those of manufacturing overall; the sector is enjoying a rebound in jobs since the auto crisis, but the replacement jobs pay substantially lower wages. While part of the reason for lower average auto wages is due to the relative increase in workers in parts plants that pay less than the assembly plants, the replacement jobs are also increasingly



placed via staffing and temporary agencies that pay lower wages. The report uses state data from the “Auto Alley” states—Alabama, Georgia, Illinois, Indiana, Kentucky, Michigan, Mississippi, Ohio, South Carolina, and Tennessee—to provide more refined information regarding lower earnings and wages in auto jobs.

Workers profoundly feel these shifts. Phillip Hicks explained to *The Washington Post* that his only option for a job at a Toyota plant in Georgetown, Kentucky was through the staffing agency Manpower, Inc. Manpower assured Hicks that he would be able to switch to Toyota payroll after a year or two, promising a doubling of his salary from \$12.60 to \$24.20 an hour and gaining benefits.¹ But after four years, Hicks was still waiting for a permanent employee position, unable to afford health benefits for his family or take more than three days off per year without risking his job, because of a punitive leave policy that only applied to “temps.”²

If these wage trends continue, manufacturing and auto jobs will not deliver on the promise of creating livable jobs with positive economic revivals in communities and for families.

1 Communities are racing to create “good jobs in manufacturing”

Government policymakers and state and local economic development agencies see manufacturing jobs as important to economic growth because they create a ripple effect, generating additional jobs in other manufacturers that supply a plant, as well as in restaurants and retail, transportation and logistics, and white-collar professional services that support the plant. Manufacturing jobs are thus highly sought after by our federal and state policymakers, lauded as “advanced industries” that generate investments, create a high number of direct and indirect jobs, enhance worker skills, and generate additional economic activity in related industries.³

In addition, the general public perceives that manufacturing jobs can uplift the economy by delivering good jobs and generating additional employment in related support industries. Recent poll results show that respondents think that manufacturing is the most important job sector, in terms of strengthening the economy.⁴ During election seasons in particular, many public-office-seekers resolve to create and promote manufacturing jobs, scheduling photo-ops in front of manufacturing plants with workers and business owners. And our public policymakers promote manufacturers as saviors for still-struggling local economies, luring them with subsidies and state welcome mats.⁵

Recent poll results show that respondents think that manufacturing is the most important job sector, in terms of strengthening the economy.

Thanks to global market forces and aggressive courting and subsidies by the federal government and states, some manufacturing jobs are rebounding, but the quality of too many of the returning jobs is low and fails to live up to workers’ and the overall public’s expectations.

The perceived importance of manufacturing jobs leads to state competition and generous subsidies.

States and towns compete fiercely to lure manufacturing plants with generous subsidies that strain public budgets. These large public subsidies are premised, and largely supported locally, on the expectation that companies will create good manufacturing jobs that boost the local economy, both through jobs at the plant itself as well as those that arise in the network of suppliers that serve it and beyond. Yet, subsidies that taxpayers were asked to support have not always delivered the good jobs that employers promised and the states expected.

Subsidies that taxpayers were asked to support have not always delivered the good jobs that employers promised and states expected.

Subsidy programs have included a broad array of supports, including corporate income tax credits (for job creation, capital investment, research and development), cash grants, low-cost or forgivable loans, enterprise zones, reimbursement for workers’ training expenses, and other types of company-specific state assistance.⁶ Companies may also receive property tax abatements, whose cost is borne by local taxpayers and comes at the potential expense of other goods and services.⁷ But many subsidy programs come with few meaningful conditions: many require little if any job creation; fewer than half provide any kind of wage standard for the workers in subsidized companies; and fewer than a quarter require any level of health coverage.⁸ Moreover, subsidy programs aimed at creating new jobs tend to attach wage and benefits standards only to full-time, permanent positions, and have not consistently applied those standards to part-time and temporary workers or contractors within the subsidized company.⁹

Dozens of large manufacturing companies have come to expect states to undertake worker-training responsibilities in exchange for creating jobs, even when the companies have the financial capabilities to train workers themselves.¹⁰ If the training is too narrowly focused on a low-wage temporary job, the state's investment may have no lasting benefit to workers, who are not any more prepared to get a better-paying and higher-skilled job.¹¹

The costs to local and state budgets are staggering. Notable deals have included the following:

- A nearly \$1.3 billion package to Nissan to build a Canton, Mississippi plant in 2001, including a controversial 25-year state tax rebate for jobs that, in many cases, start at just \$12 per hour;
- A \$1 billion subsidy package for ThyssenKrupp to build a steel plant in Mobile, Alabama;¹²
- A 2007 package deal for Alcoa worth \$5.6 billion, giving a 30-year discounted electricity deal for an aluminum plant;
- A \$3.2 billion deal in tax breaks and other subsidies for Boeing's aircraft manufacturing facilities in 2003;¹³ and
- A 2006 deal with Kia Motors brokered by Georgia Governor Sonny Perdue, worth \$410 million and estimated to cost about \$160,000 for each of the projected direct jobs at the plant.¹⁴

Taxpayers may find that they have been essentially asked to subsidize a large company whose promise of good jobs never materializes.

These generous packages may not ultimately make a difference, however, in a manufacturer's decision about whether and where to locate new plants. States have provided generous subsidies to foreign auto companies that, research suggests, would have begun operations in the United States regardless of the supports, in order to strengthen their market share and counteract the effects of import controls.¹⁵ By the 1990s, foreign auto-



makers were expanding their operations in the United States, especially in southern “right to work” states, to take advantage of what had now become relatively cheap U.S. labor and to avoid rising shipping costs.¹⁶ Companies also may accept subsidies even as they choose sites for their proximity to markets, as Toyota did in 2003 when it chose to locate a new assembly plant in San Antonio, passing up more generous subsidies to build in other locations because of the new site's access to the large Texas market for pick-up trucks to be built at the plant.¹⁷ Taxpayers may find that they have essentially been asked to subsidize a large company whose promise of good jobs never materializes.

2 “Onshoring” has sparked a resurgence of U.S. manufacturing

Manufacturing in the U.S. is on the rebound. Between 2010 and 2012, the sector grew by 4.3 percent.¹⁸ While the share of employment in manufacturing has shrunk rapidly in the decades since the Second World War, falling from over 40 percent of private non-farm employment in 1945 to just over 10 percent in 2013, there is a core of manufacturing work (including auto and computers) that is bouncing back and is likely to remain in the United States. Foreign and domestic manufacturers are making major investments in the U.S. market, including BMW’s Spartanburg, South Carolina plant, which is in the midst of a \$900 million expansion.¹⁹ From a trough of 11.5 million jobs in 2010, manufacturing jobs grew to just over 12 million in 2013.²⁰ Five million workers work in the United States for foreign firms, and one-third of them work in manufacturing jobs.²¹

Chinese, Japanese, and U.S. manufacturers are establishing plants in the South in particular, where labor standards are weaker.

Onshoring by manufacturers is one cause of the domestic resurgence of manufacturing jobs; they are rebounding here because wages are lower than they used to be.²² Chinese, Japanese, and U.S. manufacturers are establishing plants in the South in particular, where labor standards are weaker.²³ The Boston Consulting Group’s 2012 survey found that 37 percent of the nation’s largest manufacturers are considering bringing some production back to the United States from China.²⁴ The wage differential between Chinese and U.S. workers is projected to shrink to \$7 an hour by 2015, down from \$17 an hour in 2006.²⁵ Many manufacturers have returned to the United States due to their just-in-time production cycles, the increasing costs of shipping and moving heavier and bulkier component parts like auto interiors, proximity to demand and to energy sources or natural resources, and the existence of innovation and R&D capacities.

A few examples:

- General Electric moved its electric water heater production from Mexico to Louisville, Kentucky, and hired workers at \$13 an hour.²⁶
- Lenovo, the Beijing computer maker, opened a manufacturing plant in Whitsett, North Carolina in 2013,²⁷ due to rising wages in China and the ability to offset rising logistics and transportation costs by relocating to the United States near a large customer base.
- Ford, GM, and Caterpillar also moved some operations back to the United States for similar reasons.²⁸
- Ikea opened a furniture factory in Danville, Virginia in 2008.
- Airbus is building a new factory in Mobile, Alabama.²⁹

Production and labor costs are no longer that different between international and U.S. based facilities. There has been a “wage convergence” across U.S. locations,³⁰ and international wages have risen while transportation and supply-chain costs have gone up.³¹ The gap in wages across states is narrowing: the median wage in Georgia, now the lowest among the “Auto Alley” states, is just 19.8 percent lower than the median in Michigan, the highest wage on the list. While this gap is not trivial and could be due to differences in composition of jobs, it may not be enough to compel a firm to move a facility for savings of this magnitude.

While the number of returning jobs is not yet making a dent in the six million manufacturing jobs lost between 2000 and 2009, according to the Bureau of Labor Statistics, the returning jobs bring hope to local economies.³²

3 Manufacturing wages are in decline

The decline in relative wages in the manufacturing sector is striking. In most of the post-war period, manufacturing paid somewhat higher wages than other industries. But this is no longer the case.

As will be shown below, these reported average wages are artificially high due to a failure of government data to account for the lower wages in staffing and temporary agency-placed jobs in manufacturing. Most of the jobs gained since 2009 have been non-union, a key wage impact for these jobs.³³ Note that the decline in average wages in the sector corresponds with the resumption of its growth—the United States lost manufacturing jobs for decades, accelerating between 2000 and 2009. When manufacturers began growing again, the jobs they added have tended to pay less.

If recent trends continue for the next decade, hourly wages for production workers in manufacturing will be almost 9.0 percent less than for the private sector as a whole.

The existence of some high-wage manufacturing workers disguises just how many manufacturing workers there are at the bottom of the economy. **Table 1**, below, shows hourly wage cutoff points for each percentile (10, 25, median, 75, 90).

Returning jobs are simply not paying as much as those that were lost in the recession. Some examples:

- General Electric is producing electric water heaters in Louisville, Kentucky, where workers are making \$13 an hour.

- Remington Outdoor Co.—the gun manufacturer—is hiring production workers for its new Alabama manufacturing facility at \$11.50 an hour. The project is eventually expected to employ 2,000 people.³⁴
- Texas Power Systems, which supplies engines to the Caterpillar plant in Seguin, Texas, hires workers through a staffing agency for \$10.50 an hour. Workers get a raise to \$10.75 if they are hired on as direct employees.³⁵
- A Vaughan-Basset Furniture plant in Galax, Virginia pays its recent hires \$9 an hour.³⁶

Manufacturing wages have fallen behind the rest of the private sector.

The longest view we have on wages is the Census Bureau’s Current Population Survey (CPS), which relies on household surveys to track wage data over many years. As shown in **Figures 1 and 2**, from 1976 to 2006, the median wage for manufacturing workers was higher than for private-sector workers as a whole. That changed in 2007, and has continued to decline since.³⁷

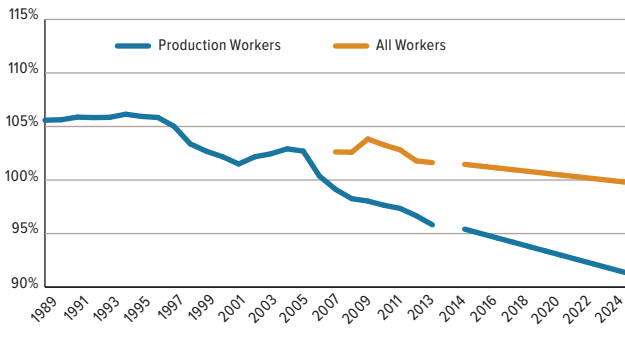
Other data sources, such as the Bureau of Labor Statistics’ Occupational Employment Statistics (OES), allow us to look more closely at both industry (“manufacturing” or “motor vehicle assembly”) and occupation (“all production workers”). The OES data, which collects data from businesses rather than individual workers, shows the median wage for manufacturing workers is 7.7 percent lower than for all workers (public and private sector).³⁸ When manufacturing workers are compared to all goods-producing workers (which includes other blue-collar production occupations such as construction, logging, and mining), we can see the median wage

Table 1. Manufacturing Production Wages by Percentile, 2013

Total Employment in Occupation	Mean Wage	Wage at 10th Percentile	Wage at 25th Percentile	Median Wage	Wage at 75th Percentile	Wage at 90th Percentile
6,163,470	\$17.11	\$9.60	\$11.91	\$15.66	\$20.76	\$27.17

Source: Bureau of Labor Statistics, Occupational Employment Statistics, data for NAICS Sector 31-33, All Production Occupations (51-0000), May 2013, available at <http://www.bls.gov/oes/>.

Figure 1. Relative Wages of Manufacturing Workers to All Workers



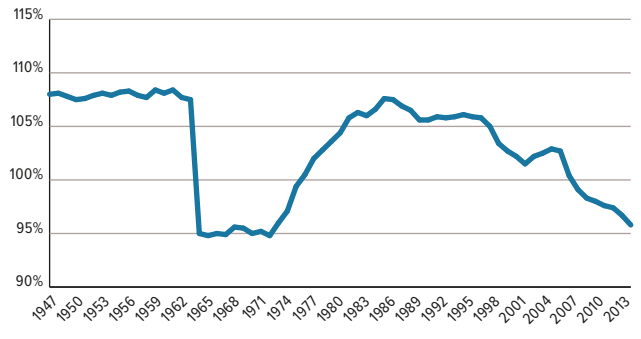
Source: U.S. Census Bureau, Current Population Survey.

for manufacturing is 3.6 percent below the average for the goods-producing sector as a whole.³⁹

In 2007, the wage gap reported in the CPS data was fairly modest—\$19.57 per hour for all private-sector workers, compared with \$19.40 an hour for manufacturing workers. (Note that the CPS data include a somewhat broader group of occupations than the BLS data, so median wages tend to be higher than they would be for production workers alone.) But by 2013, the gap had widened considerably, to 85 cents an hour. If these recent trends continue for the next decade, hourly wages for manufacturing workers will be almost 9.0 percent less than for the private sector as a whole. See **Figure 1**, above.

In previous decades, the path of wages in manufacturing generally followed the pattern of employment. As **Figure 2** above shows, in the late 1940s and early 1950s,

Figure 2. Pay in Manufacturing Relative to Overall Average (Production Workers)



Source: U.S. Census Bureau, Current Population Survey.

the average hourly wage for production workers in the manufacturing sector was close to 10 percent higher than the average for the private sector as a whole. The gap peaked in 1985, with wages for manufacturing workers 7.6 percent higher than the average for the private sector as a whole. Manufacturing wages then began to fall relative to the private sector as a whole, dropping below the private-sector average in 2007 and continuing to edge downward in subsequent years. (Note: The sharp drop shown in 1964 is associated with a break in the series; it does not reflect anything that happened in the economy in that year.)

This downward trajectory of manufacturing wages relative to all private-sector employment cannot be overlooked. If the wage trends continue, manufacturing jobs will not deliver on the promise of creating livable jobs with positive economic revivals in communities and families.

Table 2. Changes in Real Wages, All Manufacturing Workers, 2003–2013

Year	Total Employment in Occupation	Mean Wage	Wage at 10th Percentile	Wage at 25th Percentile	Median Wage	Wage at 75th Percentile	Wage at 90th Percentile
2003	7,456,360	\$18.04	\$10.15	\$12.57	\$16.38	\$22.11	\$29.38
2013	6,163,470	\$17.11	\$9.60	\$11.91	\$15.66	\$20.76	\$27.17
Change		-5.2%	-5.4%	-5.3%	-4.4%	-4.7%	-6.1%

Source: Calculations by the authors. (Bureau of Labor Statistics, Occupational Employment Statistics, data for NAICS Sector 31-33, All Production Occupations (51-0000), May 2003 and May 2013, available at <http://www.bls.gov/oes/>.)



Manufacturing wages are not even keeping up with inflation.

Wages in manufacturing are not keeping up with inflation.⁴⁰ As shown in **Table 2** on the previous page, the median wage for all manufacturing workers in the United States is \$15.66 per hour. In real terms, however, since 2003, the inflation-adjusted median hourly wage for manufacturing workers has declined by nearly \$1.00 an hour, from \$16.38 to \$15.66 (in 2013 dollars). That amounts to a drop of over 4 percent. For a manufacturing worker who works 40 hours a week, 52 weeks per year, that translates to a drop in income of about \$2,000 a year.

The public assumes that manufacturing jobs are highly paid, but the reality is that millions of manufacturing workers are at the bottom of the wage scale.

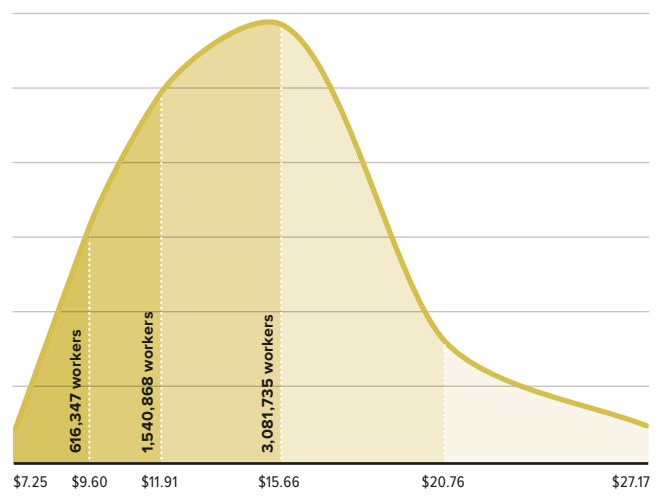
Looking closer, the data reveal that there have been similar declines in real wages across all income categories.

The hidden reality of low-wage manufacturing workers.

When people say they support bringing manufacturing jobs to their community, they are probably thinking of those positions at the higher end of the wage scale. Fortunately, there are still some of those high-wage manufacturing jobs left. They disguise the fact that millions of manufacturing workers are at the bottom of the wage spectrum, however.

The Bureau of Labor Statistics’ Occupational Employment Statistics (OES) data report wages by percentiles, which provides more detail about what is happening to workers than what is apparent through the reported averages. The 10th percentile, for example, means that 10 percent of workers make at or below that wage rate. The 25th percentile means one-quarter of workers make at or below that wage rate, and so on. The OES data reports that in 2013, there were approximately 6.2 million production workers in manufacturing. More than 600,000 of those workers make just \$9.60 or less, and more than 1.5 million of those workers make \$11.91 or less.⁴¹ See **Figure 3**, below.

Figure 3. Distribution of Hourly Wages for Manufacturing (Production) Workers



Source: Bureau of Labor Statistics, Occupational Employment Statistics, data for NAICS Sector 31-33, All Production Occupations (51-0000), May 2013, available at <http://www.bls.gov/oes/>.

4 Case Study: The changing nature of automotive work

Motor vehicle manufacturing and supply is a significant sector in our economy, and is the largest manufacturing sector.⁴² Employment in the auto sector has followed the same general downward path as manufacturing as a whole, although the sector's jobs have rebounded since 2009. At the start of the 1950s, autoworkers accounted for more than 2.0 percent of private-sector employment. This share has dropped to just 0.7 percent in the last decade. But, auto has added over 340,000 jobs since the 2009 fallout, according to the U.S. Treasury, making it one of the few sectors in this recovery that is relatively healthy.⁴³ By taking a closer look at this group of manufacturing workers—especially workers in the parts sector, who tend to be paid less—we can gain some insight into some of the factors that are driving down wages across the manufacturing sector.

Thus, the definition of what an auto job is has changed over the years, with significant consequences for the wages of workers in this sector. In addition to the drop in its share of total employment, there has also been a substantial change in the employment mix in the sector, changing the way the industry operates and altering the quality of the average job. Throughout the 1960s, when wages were at their peak, the share of autoworkers employed in auto assembly plants had been close to 50 percent, when wages were at their peak in the industry. It began to decline slightly in the early 1970s, but was still almost 46 percent in the mid-1980s.

Today, 72% of autoworkers are employed in the auto parts sector, where wages are much lower. Parts suppliers increasingly rely on staffing firms for labor.

Between 1980 and 1990, the mix shifted dramatically. In 1980, 49 percent of autoworkers were in the supplier sector, and by 1990, it had climbed to 69 percent. Growth in the supplier or parts sector since 1990 has been comparatively marginal. In 2013, according to Current Employment Survey data, there were 147,400 auto assembly production workers and 384,500 production workers employed by auto parts suppliers. In other

words, today 72 percent of autoworkers—nearly three out of every four—are in the parts sector. That number is significant because, according to data from the Bureau of Labor Statistics, the median wage for workers in the auto parts sector is one-third less (36 percent) than for a worker in a final vehicle assembly plant.⁴⁴ Further, auto suppliers—like many other manufacturers—are increasingly turning to staffing and temp firms to supply their labor. The industry has been a multi-tiered one for decades, and the sometimes-elaborate supply chain matrix has grown more complex in recent years. Auto suppliers have begun to outsource their labor supply to staffing and temporary firms, as described below, creating yet another level of contracted work in the industry and lowering wages even further. As shown below, the reported median wage in auto parts manufacturing is around \$15 an hour, but this is inflated because of some still relatively higher-paying jobs in union shops or higher-skilled positions in the industry, and because jobs placed by staffing or temporary firms that pay less are measured separately.

The U.S. auto industry is seeing an impressive rebound.

As the economy collapsed and auto production in the United States bottomed out in 2009, every automaker—foreign and domestic—scaled back production and laid off workers.⁴⁵ Since then, U.S. auto production has rebounded, from a low of 5.7 million vehicles in 2009 to 11.1 million vehicles in 2013.⁴⁶ This rebound is reflected both in the number of jobs in the U.S. auto industry and the amount of investment that automakers have made in their U.S. production plants. Foreign and domestic companies have added 350,000 new jobs at their U.S. auto assembly and parts plants since the auto crisis in 2009. They have made \$38 billion in capital investment since 2009.⁴⁷ This suggests a commitment by U.S. and foreign producers to keep jobs in the United States.

New jobs and more investment are good news. Major investments in U.S. factories makes it more likely that these jobs will stay in the United States, and as long as automakers are assembling cars here, there are economic incentives for them to maintain a significant

network of parts plants here as well, given the demands of just-in-time production, high shipping costs for certain types of parts, and the desire to reduce or eliminate the costs of warehousing and inventory of parts. While the manufacturing of certain automotive components—such as airbags, wiring harnesses, seatbelts, and audio systems—have largely moved outside of the United States, there are economic incentives for many other parts to be produced domestically, near the assembly plants they supply. These include parts of the car that are too heavy or bulky to ship, as well as parts built essentially to order in just-in-time plants where inventory is measured in hours, not days or weeks.

But the quality of automotive jobs is declining.

Historically, average pay in the auto industry far outpaced other private-sector jobs. In the 1950s and 1960s, the industry-wide average wage was roughly 30 percent higher than the average for the private sector as a whole. It then rose relative to the private-sector average in the 1970s, peaking in the mid-1980s at more than 150 percent of the average private-sector wage.

But by many measures—because of the declines in the relative pay in the parts sector and also the decline in the share of workers employed in auto assembly plants—average pay for autoworkers is now comparable to pay in the rest of the private sector.

As **Table 3** below shows, between 2003 and 2013, the real (inflation-adjusted) wage for auto parts workers fell by 13.7 percent. Auto parts workers toward the top of the pay scale—the “good manufacturing jobs”

that communities work so hard to retract and retain—saw the most dramatic decline. The wage at the 75th percentile—presumably, the most skilled and experienced employees—plummeted by 29 percent. In auto assembly, real wages fell by 21 percent during that same period.

The median wage for auto parts workers is \$15.83 an hour, still 17 cents an hour above the median for all manufacturing workers. One out of ten auto parts workers makes less than \$10.38 an hour, and approximately one out of every four makes less than \$12.63—just slightly above the average for all manufacturing workers.

As **Table 4** on the next page shows, median wages for autoworkers are falling significantly faster than for manufacturing workers as a whole. Median wages for auto parts workers, for example, fell three times faster than wages for manufacturing workers as a whole, and nine times faster than the average for all occupations. Motor vehicle manufacturing fell nearly five times faster than the average for all manufacturing workers.⁴⁸ Because auto companies factor in labor costs when they decide whether to do work in-house or contract with a supplier, lower wages in the supplier sector can drag down wages at the final assembly plants as well.

The auto jobs being created are worse than the ones lost.

The wage trends in the automotive sector track the trends in overall manufacturing: the replacement jobs following the auto crisis and recession are not on a par with those that were lost.

Year	Wage at 10th Percentile	Wage at 25th Percentile	Median Wage	Wage at 75th Percentile	Wage at 90th Percentile
2003	\$11.61	\$14.26	\$18.35	\$28.41	\$36.54
2013	\$10.38	\$12.63	\$15.83	\$20.17	\$27.13
Change	-10.6%	-11.4%	-13.7%	-29.0%	-25.8%

Source: Calculations by the authors. (Bureau of Labor Statistics, Occupational Employment Statistics, data for NAICS Code 3363, All Production Occupations (51-0000), May 2003 and May 2013, available at <http://www.bls.gov/oes/>)

Table 4. Comparison of Real Wages, 2003–2013, Manufacturing Occupations vs. All Occupations

Year	All Occupations	All Manufacturing	Motor Vehicle Manufacturing	Parts Manufacturing
2003	\$17.13	\$16.38	\$31.45	\$18.35
2004	\$17.06	\$16.16	\$31.09	\$18.26
2005	\$16.88	\$15.90	\$28.38	\$17.74
2006	\$16.88	\$15.76	\$28.37	\$17.43
2007	\$16.97	\$15.73	\$29.09	\$16.99
2008	\$16.85	\$15.65	\$29.37	\$16.49
2009	\$17.32	\$16.10	\$29.62	\$16.74
2010	\$17.38	\$16.10	\$27.93	\$16.69
2011	\$17.16	\$15.88	\$26.11	\$16.53
2012	\$16.95	\$15.74	\$25.21	\$16.14
2013	\$16.87	\$15.66	\$24.83	\$15.83
% Change	-1.52%	-4.40%	-21.05%	-13.73%

Source: Calculations by the authors. (Bureau of Labor Statistics, Occupational Employment Statistics, All Production Occupations (51-0000) for NAICS Sector 31-33 and NAICS Codes 3361 and 3363, and All Occupations (00-0000), May 2003 and May 2013, available at <http://www.bls.gov/oes/>.)

Alabama: Auto Jobs on the Rise, But Paychecks Decline

Alabama refers to itself as the “center of the Southeast’s auto industry,”⁴⁹ and with good reason. Before 1997, when Mercedes opened the first auto assembly plant in the state, the Alabama automotive industry was nearly non-existent. Then, Honda opened a plant in Alabama in 2001, followed by Hyundai in 2005.⁵⁰ Kia built its plant in West Point, Georgia, on the Alabama border, in 2010.⁵¹ Toyota has also made engines in Huntsville, Alabama, since 2003.⁵² Today, there are 12,800 workers employed at auto assembly plants in the state, and another 20,700 at parts suppliers.

Since 2001, the number of auto parts workers in Alabama has grown by 64 percent. But while the number of auto jobs in Alabama has been on the rise, paychecks have been on the decline. From 2001 to 2013, real (inflation-adjusted) monthly earnings for Alabama auto parts workers have declined by 42 percent—more than any other major auto-producing state. The average Alabama auto parts worker took home \$1,593 less in 2013 than he or she did in 2001.⁵³

What may be contributing to these falling wages, even as the Alabama auto industry thrives? There are several likely factors:⁵⁴

- New hires are taking home about \$600 less per month than the typical auto parts worker in the state—17 percent below the statewide average. The significant number of new hires in Alabama—both in terms of new auto parts jobs coming to the state, and the significant turnover in existing jobs—contribute to pulling down the average wage for autoworkers overall.
- In the period from 2001 to 2013, the number of young auto parts workers (aged 19 to 34) nearly tripled—a growth rate twice as fast as the Alabama auto parts industry as a whole.
- Young workers tend to make less than older workers. In Alabama, the monthly incomes of auto parts workers under 22 are two-thirds of the state average wage for that sector. Workers aged 22 to 24 make three-quarters of the average.
- Meanwhile, older workers have seen their wages go backwards. Alabama auto parts workers 45 and older saw real wages decline by 50 percent or more from 2001 and 2013. Workers aged 35 to 44 saw real wages shrink by one-third over that same period.

In addition to the evidence cited above, state-level data on the auto industry taken from the Census Bureau’s Quarterly Workforce Indicators—which measures quarterly earnings, not hourly wages—can shed some additional light on trends affecting workers. Auto manufacturing is concentrated in a relatively small number of states, known as the “Auto Alley”—mainly Michigan, Ohio, Indiana, Illinois, Kentucky, Tennessee, Mississippi, South Carolina, Alabama, and Georgia.

Median wages for autoworkers are falling significantly faster than for manufacturing workers as a whole.

For auto parts workers, just one state—Mississippi—has new hires collecting monthly earnings similar to the statewide average for parts workers. In every other state, new-hire wages are dramatically lower. See **Table 5**, top right. In 5 of the 10 states, monthly incomes for new hires are around one-quarter less than the state average.

Real monthly earnings are declining for all autoworkers, not just new hires.

In a majority of Auto Alley states, parts workers have seen real (inflation-adjusted) monthly earnings decline from 2001 to 2013. See **Table 6**, bottom right. Kentucky and Georgia—the two states with the lowest monthly earnings in 2001—saw increases, along with South Carolina. In Alabama, which saw the largest decline in monthly earnings at 24 percent, a worker’s monthly paycheck was \$1,200 less in 2013 than in 2001.

Table 5. Monthly Earnings, Motor Vehicle Parts Manufacturing Workers, New Hires vs. All Workers

State	% Difference for New Hires
Michigan	-28%
Indiana	-27%
Ohio	-25%
South Carolina	-24%
Tennessee	-23%
Kentucky	-18%
Alabama	-17%
Illinois	-16%
Georgia	-7%
Mississippi	1%

Source: Calculations by the authors (U.S. Census Bureau, Longitudinal Employer-Household Dynamics, Quarterly Workforce Indicators, 2013, NAICS Code 3363, available at <http://lehd.ces.census.gov/>.)

Table 6. Change In Monthly Earnings, 2001-2013, Motor Vehicle Parts Manufacturing Workers

State	% Difference in Monthly Earnings, 2003–2013
Alabama	-24.0%
Mississippi	-13.6%
Indiana	-12.1%
Ohio	-9.4%
Michigan	-3.3%
Illinois	-1.6%
Georgia	3.8%
Kentucky	7.9%
Tennessee	8.0%
South Carolina	13.3%

Source: Calculations by the authors. (U.S. Census Bureau, Longitudinal Employer-Household Dynamics, Quarterly Workforce Indicators, 2001 and 2013, NAICS Code 3363, available at <http://lehd.ces.census.gov/>.)

5 Heavy reliance on staffing agencies obscures much deeper problems in manufacturing

Often lost in the official numbers on employment fluctuations and wage trends is a closely related but not well-tracked trend that has reshaped manufacturing jobs over the past two decades: domestic outsourcing. Workers looking for a manufacturing job, and especially one in an auto plant today, increasingly find that the only open positions are placed by staffing agencies that pay lower wages and provide fewer benefits as compared with direct hires, and that offer limited opportunities to secure a permanent-employee position. Government data fail to include staffing agency workers in the official counts for manufacturing workers and fail to factor their wages into industry averages, however, making it difficult to track this trend with precision. Yet existing data sources offer ample evidence of this dramatic trend in manufacturing and the extent to which it has degraded jobs; these sources are substantiated by anecdotal evidence from workers and from the many towns where manufacturing plants have blossomed with the support of generous subsidies but have failed to provide family-supporting jobs.

Manufacturing firms are increasingly turning to staffing and temporary agencies to hire their workers.

In the two decades from 1989 to 2009, two emergent labor market trends reshaped the nature of manufacturing jobs.⁵⁵ First, manufacturers looked to the staffing services industry to source their production workers, creating a shift in the types of jobs that staffing companies placed: that is, increasingly “blue collar” and other manual labor, rather than the office-based clerical jobs that defined the staffing industry in earlier years. The number of staffing agency workers assigned to manufacturing grew by about one million from 1989 to 2000, from about 419,000 workers to almost 1.4 million, and data suggests that this trend continues.⁵⁶ In 1990, 42 percent of staffing agency jobs were office and administrative support work, while only 28 percent were blue-collar positions.⁵⁷ This balance had reversed by 2006, with blue-collar workers accounting for 44 percent of staffing agency jobs.⁵⁸ Industrial and factory staffing now form the single largest source of revenue for the staffing industry.⁵⁹



Second, manufacturing employers began to rely more heavily on staffing services to fill core production and low-skilled manual occupations as opposed to only for peripheral functions, such as janitorial.⁶⁰ In 1989, less than 1 percent of all production workers were employed by staffing agencies, but by 2000, that fraction had risen to 6.1 percent.⁶¹ This upward trend was mirrored in other manual occupations: 6.4 percent of all helpers, laborers, and hand material movers in 1989 were employed by staffing agencies, rising to 15.6 percent by 2000.⁶² In 1989, there were approximately 43 direct-hire workers for every one staffing agency worker in manufacturing, but by 2000, researchers estimate that this ratio had dropped to 12 to 1.⁶³ And data suggest that the trend has continued, with the staffing agency sector adding 9.2 percent, or 1.3 million workers, to direct-hire manufacturing in 2006, the last year this data is available, as compared with 2.3 percent in 1989 and 8.2 percent in 2000. Staffing agencies made an even more dramatic addition to low-skilled manual occupations in 2006, where for every 100 low-skilled manual laborers directly hired by manufacturing employers, there were another 35 low-skilled manual laborers hired by staffing agencies.⁶⁴

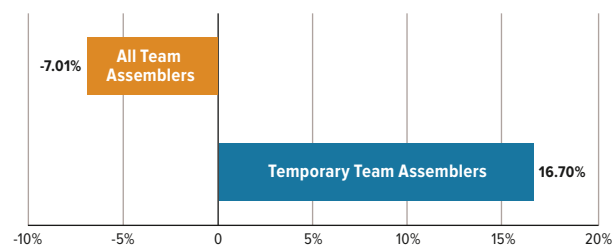
Outsourcing dramatically affects job-growth and wage-level numbers.

Taking into account the rise of outsourcing dramatically alters measures of manufacturing employment and of labor productivity.⁶⁵ While measured manufacturing employment declined by 4.1 percent from 1989 to 2000, if staffing agency workers (who usually work alongside and under the same supervision as direct-hire employees) were counted, manufacturing employment would have actually risen by 1.3 percent.⁶⁶ Factoring in manufacturers’ use of staffing agency workers does not erase the long declines in manufacturing employment since 2000, but it does show that an increasing share of manufacturing work is being done by staffing agency workers.⁶⁷

For instance, the growth of outsourcing and the related decline in wages is apparent in the NAICS data on the occupation of Team Assemblers—essentially, assembly line workers—which represents the largest category of production workers in manufacturing. Since 2002, the number of temporary Team Assemblers across all industries has grown from 57,520 (5.0 percent of all team assemblers) in 2002, to 176,590 (16.7 percent) in 2013.⁶⁸ Over the same time period, the total number of Team Assemblers, across all industries, shrunk 7.1 percent.⁶⁹ See **Figure 4**, at right. This means temporary workers are playing an increasing part of a continuously shrinking manufacturing pie.⁷⁰

Unpublished Census Bureau data suggests this economy-wide distribution of temporary Team Assemblers is mimicked within the auto parts sector. The Quarterly Survey of Plant Capacity records, but does not publish, the number of staffing agency workers assigned to

Figure 4. Team Assemblers, Change in Employment, 2002–2013



Source: Unpublished Census Bureau data, on file with the authors.

manufacturing. For the first two quarters of 2014, this data show that auto parts manufacturers used staffing agencies to supply 13.5 to 14.5 percent of their workforce.⁷¹ Assuming that the currently reported 318,020⁷² auto parts production workers only represent 85.5 percent of workers on the shop floor, an additional 53,933 staffing agency workers (and 17,623 agency-employed Team Assemblers) are unaccounted for in official industry figures. This is significant, because the median wage of Team Assemblers working through staffing agencies is 29 percent lower than Team Assemblers directly hired in the auto parts industry.⁷³

The growth of agency-employed production workers and their below-industry-standard wages may help explain in part the fall in auto parts production wages over the past decade. Between 2003 and 2013, real (inflation-adjusted) wages for Team Assemblers in the auto parts industry fell \$1.47 an hour (9.2 percent), while real wages for all auto part production workers fell \$2.77 an hour (15 percent). The degradation we see in the industry therefore looks closely connected to the increased outsourcing of jobs to temporary staffing agencies. See **Table 7**, below.

Table 7. Team Assembler Wages by Industry						
Industry	Mean Wage	Wage at 10th Percentile	Wage at 25th Percentile	Median Wage	Wage at 75th Percentile	Wage at 90th Percentile
Auto Parts	\$15.56	\$10.21	\$12.17	\$14.54	\$17.72	\$23.14
Temp Agencies	\$11.36	\$8.12	\$8.87	\$10.33	\$12.67	\$16.79

Source: Bureau of Labor Statistics, Occupational Employment Statistics, data for NAICS Codes 3363 and 5631, Team Assemblers (51-2092), May 2013, available at <http://www.bls.gov/oes/>.

Conclusion

Anecdotal reports show that more auto plants are hiring via staffing and temporary agencies, with poorer working conditions.

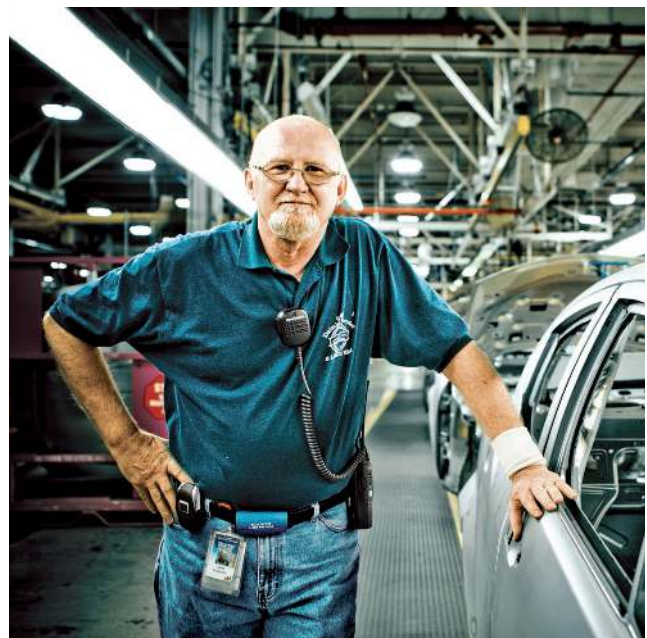
Numerous press stories profile workers with few options as the factories in their towns replaced the employees laid off during the recession with staffing agency workers, and as foreign auto manufacturers that established plants in the South starting in the 1990s are relying heavily on staffing agencies to provide labor. Some companies abruptly converted their existing employees to “temporary” employment. Employees at A&E Services, a small auto parts manufacturer in Chicago, for example, learned that their firm would “no longer hold general labor employees on its payroll” and that they would have to agree to work through a temporary staffing agency if they wanted to keep their jobs.⁷⁴

Workers feel these shifts deeply. In addition to the Philip Hicks story mentioned above in the introduction, Betty McCray found herself in a similar situation when she took a job at a Nissan Auto plant in Smyrna, Tennessee, preparing parts for the assembly line.⁷⁵ Although she works alongside permanent Nissan employees, as a staffing agency worker, she is paid less, gets no personal days, and has to bring in a doctor’s note in order to get a sick day.⁷⁶

The growth of the fiercely competitive auto parts supply sector and its heavy use of outsourcing can also have serious implications for workers’ health and safety. Under intense pressure by auto companies to maximize output while constraining labor costs, suppliers and their contractors may choose to ignore safety precautions in an attempt to cut the bottom line.⁷⁷ Workers hired for temporary agency positions are unlikely to speak up and are much less likely to be able to seek support in a union, which have historically monitored safety conditions at the major auto company plants that are their base.⁷⁸ This dynamic, combined with lax occupational safety and health standards and enforcement, and the prevalence of dangerous chemicals in auto seating and other parts supply, has proven hazardous for workers, who have developed sinus infections, chronic coughs, bronchitis, shortness of breath and asthma.⁷⁹

Jobs in manufacturing and auto, important growth-generating industries, are not as good as they once were. New hires in auto earn less than \$10 an hour. What will these jobs look like in 10 years if these trends continue? The ramifications for the workers, the communities that are hosting these jobs, and the U.S. economy are far-reaching, and include increasing inequality as middle-class jobs do not return, drains on taxpayers as local and federal subsidies fail to alter manufacturers’ behavior and fail to deliver quality jobs, and a lack of accountability for businesses that seek only to enhance profits at the expense of working families and local communities.

The promise of manufacturing and auto, its largest component industry, is not lost, however. The government can resurrect the collection of credible data on temporary and staffing jobs again to better understand the impact those structures have on jobs and communities, and public entities providing subsidies should track results and hold recipients of hard-earned taxpayer dollars to account for the quality of the jobs created. This information will allow policymakers, manufacturers and the public to invest in good jobs that will sustain our communities for the decades to come. ■



Endnotes

- Jonathan Weisman, “Permanent Job Proves an Elusive Dream,” *Washington Post*, October 11, 2004, 1-2, <http://www.washingtonpost.com/wp-dyn/articles/A22773-2004Oct10.html>.
- Id.
- See Economic Development Partnership of Alabama, *Alabama Industry Profile: Automotive Industry*, 2007, https://aama.memberclicks.net/assets/docs/auto_profile.pdf; Georgia Power Community & Economic Development, *Automotive Manufacturing in Georgia*, 2014; Ohio Department of Development, *The Ohio Motor Vehicle Industry*, February 2011; Darla Moore School of Business, *The Economic Impact of South Carolina’s Automotive Cluster* (Columbia, South Carolina: University of South Carolina, January 2011); Brookings Advanced Industries Series, *Drive! Moving Tennessee’s Automotive Sector Up the Value Chain* (Washington, D.C.: Brookings Institution Metropolitan Policy Program, 2013).
- See Deloitte Manufacturing Institute, *Leadership Wanted: U.S. Public Opinions on Manufacturing* (2012 Annual Index), 9; George Heaton et al., *Manufacturing Issues in the 2012 United States Presidential Campaign* (Technology Policy International, June 30, 2012); Toplines polling data commissioned by the Alliance for American Manufacturing (Steelworkers), <http://americanmanufacturing.org/>.
- See *id.*, note 1.
- Philip Mattera, et al., *Money for Something: Job Creation and Job Quality Standards in State Economic Development Subsidy Programs* (Washington, D.C.: Good Jobs First, December 2011), <http://www.goodjobsfirst.org/sites/default/files/docs/pdf/moneyforsomething.pdf>.
- Id.
- Id.
- Id. at 19.
- Motoko Rich, “Private Sector Gets Job Skills; Public Gets Bill,” *New York Times*, January 7, 2012, at <http://www.nytimes.com/2012/01/08/business/states-pay-to-train-workers-to-companies-benefit.html?pagewanted=all>.
- Id.
- “Alabama’s Largest Incentives Packages in Last 20 Years,” *Business Alabama*, <http://www.businessalabama.com/Incentives.pdf> (based on data from Good Jobs First).
- Philip Mattera, Kasia Tarczynska, and Greg LeRoy, *Megadeals: The Largest Economic Development Subsidy Packages Ever Awarded by State and Local Governments in the United States* (Washington, D.C.: Good Jobs First, June 2013), http://www.goodjobsfirst.org/sites/default/files/docs/pdf/megadeals_report.pdf
- “Case Study of Foreign Auto Assembly Plants,” Good Jobs First, accessed October 20, 2014, <http://www.goodjobsfirst.org/corporate-subsidy-watch/foreign-auto-plants>.
- Id.
- Id.
- Id.
- David Wessel and James Hagerty, “Remade in the USA: Flat Wages Help Fuel Rebound in Manufacturing,” *The Wall Street Journal*, May 29, 2012.
- “BMW Manufacturing News Center.” *BMW US Factory BMW Expands Export Operation from South Carolina Comments*. N.p., n.d. Web. 10 Nov. 2014.
- Calculations by the authors (Bureau of Labor Statistics).
- James Fallows, “Made in America, Again,” *The Atlantic*, October 2014, 22-23.
- According to the Boston Consulting Group, companies find the United States attractive because of its low labor costs relative to Europe and Japan. Brad Plumer, “Is U.S. Manufacturing Making a Comeback – or Is It Just Hype?,” *Washington Post Wonkblog*, May 1, 2013.
- Id.
- Id.; Id.; “BMW Manufacturing News Center.” *BMW US Factory BMW Expands Export Operation from South Carolina Comments*. N.p., n.d. Web. 10 Nov. 2014.
- Plumer, “Is U.S. Manufacturing Making a Comeback”.
- Wessel and Hagerty, “Remade in the USA”.
- Plumer, “Is U.S. Manufacturing Making a Comeback”.
- Id. GM is moving the Cadillac SRX, the brand’s best seller, to Spring Hill, TN. “Cadillac SRX Production Moving to TN, Next-Gen Equinox Going to Mexico,” AutoBlog, accessed November 5, 2014, <http://www.autoblog.com/2014/08/29/cadillac-srx-spring-hill-chevy-equinox-mexico/>.
- Id.
- Calculations by the authors (Occupational Employment Statistics mean and median wages by state).
- Brookings Institute, *Drive!*, at v, 24.
- Id.
- Plumer, “Is U.S. Manufacturing Making a Comeback?”
- “How to Apply for a Production Job at New \$110M Remington Gun Plant in Huntsville,” Al.com, http://www.al.com/business/index.ssf/2014/06/remington_huntsville_jobs_guns.html.
- Sanford Nowlin, “Caterpillar Supplier Eyes More Hiring, Aiding Third Production Line,” *San Antonio Business Journal*, October 28, 2011, <http://www.bizjournals.com/sanantonio/print-edition/2011/10/28/caterpillar-supplier-eyes-more-hiring.html?page=all>.
- Id.
- U.S. Census Bureau, Current Population Survey.
- U.S. Bureau of Labor Statistics, Occupational Employment Statistics, NAICS Sectors 31-33, All Production Occupations (SOC Code 51-000) compared to All Private and Public Sector Workers (SOC Code 00-0000).
- U.S. Bureau of Labor Statistics, Economic News Release, “Table B-3: Average Hourly and Weekly Earnings of All Employees on Private Nonfarm Payrolls by Industry Sector, Seasonally Adjusted,” available at <http://www.bls.gov/news.release/empst.t19.htm>. Based on OES Establishment data. Note that these medians include all occupation codes, not just production occupations, so that median wages are significantly higher.
- Wessel and Hagerty, “Remade in the USA”.
- Bureau of Labor Statistics, Occupational Employment Statistics, NAICS Code 31-33 (Manufacturing), Production Occupations (Occupation Code 51-0000), available at <http://www.bls.gov/oes/>, accessed October 2014.

-
42. Thomas Klier and James Rubenstein, *Who Really Made Your Car? Restructuring and Geographic Change in the Auto Industry* (Kalamazoo, WI: W.E. Upjohn Institute for Employment Research, 2008).
43. U.S. Department of the Treasury, "TARP Programs: Auto Industry," last modified October 14, 2014, <http://www.treasury.gov/initiatives/financial-stability/TARP-Programs/automotive-programs/Pages/default.aspx>
44. Bureau of Labor Statistics, Occupational Employment Statistics.
45. Drew Speier, "Toyota Layoffs Shock Workers," WFIE News-14 (Evansville, IN), available at <http://www.14news.com/story/6435509/toyota-layoffs-shock-workers>, accessed November 10, 2014; Jeffrey Collins, "Layoffs Ahead for S.C. Temp Workers at BMW," *Charlotte Observer*, October 18, 2008, available at http://www.charlotteobserver.com/2008/10/18/261224_layoffs-ahead-for-sc-temp-workers.html#VGEgfTTF9yw, accessed November 10, 2014; Ralph Kisiel, "Honda Axes Factory Temps as Output Falls," *Automotive News*, March 9, 2009, available at <http://www.autonews.com/article/20090309/OEM01/303099843/honda-axes-factory-temps-as-output-falls>, November 10, 2014; "Mercedes Layoffs Not Sign of Healing Economy," *Tuscaloosa News*, September 17, 2009, available at <http://www.tuscaloosaneews.com/article/20090917/NEWS/909169969>, accessed November 10, 2014; Ian Rowley, "After Huge Loss, Nissan Plans More Layoffs," *Bloomberg Business Week*, February 9, 2009, available at http://www.businessweek.com/globalbiz/content/feb2009/gb2009029_103868.htm, accessed November 10, 2014; Michael Harley, "Hyundai to Slow Production of Santa Fe, Sonata," *Autoblog.com*, October 19, 2008, available at <http://www.autoblog.com/2008/10/19/hyundai-to-slow-production-of-santa-fe-sonata/>, accessed November 10, 2014.
46. Calculations by the authors ("United States Vehicle Production by Manufacturer," WardsAuto, available at www.WardsAuto.com, accessed October 26, 2014).
47. *State of the U.S. Automotive Industry: Investment, Innovation, Jobs and America's Economic Competitiveness* (Washington, D.C.: American Automotive Policy Council, June 2014), http://www.americanautocouncil.org/sites/default/files/State_Of_The_US_Automotive_Industry_2014.pdf.
48. Bureau of Labor Statistics, Occupational Employment Statistics, including data for All Occupations (SOC Code 00-000) and production workers (SOC Code 51-000) for all manufacturing workers (NAICS 31-33), Motor Vehicle Manufacturing (NAICS 3361), and Motor Vehicle Parts Manufacturing (NAICS 3363), <http://www.bls.gov/oes/>, accessed October 2014.
49. Economic Development Partnership of Alabama, Alabama Dept. of Commerce, "Alabama Automotive Industry Profile," 2, accessed October 11, 2014, <http://www.madeinalabama.com/assets/2013/01/automotive-industry-profile.pdf>.
50. "Automotive Hub of the South," Amazing Alabama, Alabama Power Corp., accessed October 11, 2014, <http://www.amazingalabama.com/key-industry-targets-automotive.html>.
51. Kia Motor Manufacturing Georgia, "Our History," accessed October 11, 2014, <http://www.kmmgusa.com/about-kmmg/our-history>.
52. "Toyota Marks Milestone 3-Millionth Alabama-Made Engine," (Alabama Dept. of Commerce, February 18, 2014) <http://www.madeinalabama.com/2014/02/milestone-3-millionth-alabama-made-engine>.
53. U.S. Census Bureau, Quarterly Workforce Indicators, NAICS Code 3363 (Motor Vehicle Parts Manufacturing), available at <http://ledextract.ces.census.gov/>. Calculations by the authors.
54. U.S. Census Bureau, Quarterly Workforce Indicators, NAICS Code 3363 (Motor Vehicle Parts Manufacturing), available at <http://ledextract.ces.census.gov/>. Calculations by the authors.
55. Matthew Dey, Susan N. Houseman & Anne E. Polivka, *Manufacturers' Outsourcing to Staffing Services*, 65 *Indus. & Lab. Rel. Rev.* 533 (Ithaca, NY: Cornell University ILR School, June 2012), <http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=2126&context=ilrreview>.
56. *Id.* at 548-49.
57. *Id.* at 543.
58. *Id.*
59. Rebecca Smith and Claire McKenna, *Temped Out: How the Domestic Outsourcing of Blue-Collar Jobs Hurts America's Workers* (New York, NY: National Employment Law Project & National Staffing Workers Alliance, 2014), 4, <http://www.nelp.org/page/-/Reports/Temped-Out.pdf?nocdn=1>, citing Jeremy Edwards, IBISWorld Industry Report 56132, Office Staffing & Temp Agencies in the US (2014).
60. Dey, *Manufacturers' Outsourcing* at 534.
61. *Id.* at 547.
62. *Id.* at 547-48.
63. *Id.* at 549
64. *Id.* at 557.
65. *Id.* at 534.
66. *Id.* at 557
67. *Id.*
68. Unpublished Census Bureau data, on file with authors.
69. *Id.*
70. Bureau of Labor Statistics, Occupational Employment Statistics data sets. Retrieved on June 23, 2014 from <http://www.bls.gov/oes/tables.htm>.
71. U.S. Census Bureau (2014). *Quarterly Survey of Plant Capacity*. Unpublished data.
72. Bureau of Labor Statistics (May, 2013). *Occupational Employment Statistics*. Retrieved October 22, 2014 from <http://www.bls.gov/oes/tables.htm>
73. *Id.*
74. Weisman, "Permanent Job Proves an Elusive Dream," 1-2.
75. Sarah Jaffe, "Forever Temp?," *In These Times*, January 6, 2014, http://inthesetimes.com/article/15972/permatemps_in_manufacturing.
76. *Id.*
77. Seth Freed Wessler, "What's Making These Selma, Alabama Auto Parts Workers So Sick", NBC News, *In Plain Sight*, July 14, 2014, <http://www.nbcnews.com/feature/in-plain-sight/whats-making-these-selma-alabama-auto-parts-workers-so-sick-n150136>.
78. *Id.* at 4.
79. *Id.*
-

www.nelp.org

NELP National Office

75 Maiden Lane
Suite 601
New York, NY 10038
212-285-3025 tel
212-285-3044 fax

Washington DC Office

1620 Eye Street NW
Suite 210
Washington, DC 20006
202-887-8202 tel
202-785-8949 fax

California Office

405 14th Street
Suite 401
Oakland, CA 94612
510-663-5700 tel
510-663-2028 fax

Washington State Office

317 17th Avenue South
Seattle, WA 98144
206-324-4000 tel
866-882-5467 fax

