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## Automotive industry outlook: Understanding the impact on workers and communities

*by Britton Lombardi, associate economist, and Martin Lavelle, associate economist*

On October 8–9, 2009, the Chicago Fed, along with the Cleveland Fed, Brookings Institution Metropolitan Policy Program, and the W. E. Upjohn Institute for Employment Research, held a conference to address the ongoing adjustments of the automotive work force and its communities. This article summarizes one of the key conference panels.

Materials presented at the conference are available at www.chicagofed.org/news_and_conferences/conferences_and_events/2009_auto_workforce.cfm.

**In** this *Chicago Fed Letter*, we focus on the opening panel from the recent conference, Automotive Communities and Work Force Adjustment, which was hosted by the Chicago Fed's Detroit Branch. We summarize the panel's presentations on the challenging current conditions for the broader economy, the automotive industry, and the industry's work force and communities. An upcoming *Chicago Fed Letter* will discuss the rest of the conference, including participants' evaluations of federal and state work force programs and initiatives.

### Setting the stage

William Testa, Federal Reserve Bank of Chicago, outlined the challenges faced by Michigan. Unlike the rest of the country, Michigan never recovered from the 2001 recession. Also, Michigan's employment growth has consistently lagged employment growth in the region and nation; its unemployment rate has risen steadily since 2001, reaching 15.3% in September 2009. Because of the significant restructuring of the Detroit Three (Chrysler Group LLC, Ford Motor Co., General Motors Co., or GM) and weakening automotive sales, the number of automotive jobs Michigan has lost now exceeds the number of Michigan workers still employed in the sector. Given the economic struggles of the overall U.S. economy, including falling home prices, Testa said, the prospects for displaced workers in Michigan to relocate to find new jobs have diminished. Confronted with the task of turning the Michigan economy around, the public and private sectors have taken steps to transform the economy by instituting retraining programs and trying to draw new industries and capital to the state. The latter efforts have focused on industries such as energy technology, health care technology, and travel and tourism.

John Austin, Brookings Institution, described the topic of work force adjustment as sobering and one that obliges our urgent attention. Austin said that some key questions demanded answers. How can workers gain the skills necessary for reemployment in this new era? How can programs foster an entrepreneurial drive from those basic acquirements? How can Michigan find and create new economic opportunities for retrained workers? Where are the firms that will provide such opportunities and where are the people to lead and staff them? How can we translate those opportunities into the means of rebuilding and resupplying sustained economic growth for the region? Although Michigan faces a daunting task, Austin argued that the

state, and the Midwest as a whole, can become a center of innovation, attracting public and private investment. Further, he suggested that Michigan can become a "clean, green playground," providing a high quality of life to its residents.

### Economic outlook

Ken Beauchemin, Federal Reserve Bank of Cleveland, noted that the recession will most likely be deemed to have ended in June 2009; the recession began in December 2007, according to the National Bureau of Economic Research, so this end date would make it the longest since the Great Depression. This economic recession was also deeper than previous cycles, he said, as gross domestic product (GDP) dropped to –4% a year and half after the previous peak. A similar drop occurred in the consumption of motor vehicles (and parts), which decreased by more than 20% in just 16 months.

In line with falling GDP, jobs were lost at a steep pace, according to Beauchemin. Since the beginning of the recession, almost 8 million jobs have been lost—a decrease of approximately 5% of total payroll employment. From December 2007 to June 2009, manufacturing lost 1.9 million jobs. More specifically, durable manufacturing shed 1.5 million jobs, of which auto assembly and parts production represented 325,000 jobs. As job losses have mounted, the unemployment rate has risen almost 5 percentage points, signaling a very slow and drawn-out recovery instead of the rapid recovery that historically follows a steep decline in economic activity. Because of rising unemployment, there seems to be considerable slack in the labor market: The ratio of unemployed workers to job openings has risen to almost six to one in 2009.

While we have seen some recent economic improvements, many are due to short-term stimulus programs, Beauchemin stated. And although credit market conditions have vastly improved over the past six months, banks and households are still in the process of repairing their balance sheets. There is still "generalized uncertainty" among consumers because households have adjusted their future expectations downward. Automakers will have to produce new automobiles and generate revenues under extra pressure not only from the auto industry restructuring, but also from the uncertainty of future household consumption patterns.

Most displaced auto workers will have to find new occupations and/or industries because of the lack of job openings.

Financial market conditions have improved, with lower credit spreads resulting in part from Federal Reserve policy. Many banks, however, are holding on to their reserves and remain more selective as to who qualifies for loans.

### Auto industry outlook

Thomas Klier, Federal Reserve Bank of Chicago, discussed the evolving market share of domestic and foreign-domiciled automotive companies, as well as the changing geographic distribution of automotive plants.

During this recession, light vehicle sales (after discounting the federal government's cash-for-clunkers program) have averaged an annualized rate of just below 10.0 million units in recent months, according to Klier. This is far below the 2001–06 average of 17.0 million units and the pre-recessionary mark of approximately 16.0 million units.

The auto industry's market share composition has sharply changed over the past few years, Klier said. The Detroit Three have consistently lost market share since 1955, when they had approximately 95% of the market. In 2009, the Detroit Three accounts for 45% of the market, just 12 years after they still held almost 75% of the market, stated Klier. While the share of imports has remained relatively consistent in recent decades, the Detroit Three has lost market share to foreign automakers producing vehicles in the U.S. The number of foreign automakers producing automobiles in the U.S. has grown from one in the late 1970s to ten in 2009. Foreign producers have come in waves to America: Japanese automakers came in the 1980s, German automakers in the 1990s, and Korean automakers over the past decade. These foreign automakers have shifted the locus of the U.S. auto industry. They have mainly located their automotive production operations south of Detroit (with very little overlap with locations for Detroit Three facilities); the foreign automakers' plant locations extend southward to Mississippi and Alabama, creating an "auto corridor" running north–south between I-75 and I-65, in contrast to the old "auto belt" running east–west around I-90 and I-70 (which had existed until the 1980s).

According to Klier, auto industry restructuring has led to a 70% drop in Michigan's auto-related employment since 1989; the U.S. has endured a 50% decline. Michigan's overall employment has fallen by 18% since 2000, largely because of the decline of the auto industry. However, the Detroit Three, in their process of downsizing, have also reconcentrated their remaining production in Michigan and surrounding midwestern states. If the Detroit Three can stabilize their market share, Michigan is well positioned for a rebound as North American auto sales recover from the recession because 11 of the Detroit Three's 24 assembly plants are located in Michigan. If sales can return to the 15.0 million-unit range, capacity utilization at Michigan's assembly plants will more than double from its existing rate: from 38% to 84%. Presently, however, auto industry analysts expect the Detroit Three's market share to continue to erode, Klier warned.

Klier explained the changing patterns of unemployment in Michigan from January 2000 to June 2009, including the dynamics of the most recent recession. The unemployment rate for workers aged 25–54 has diverged upward from that of workers aged 55–64 over the past three years; previously the two rates had run in tandem. Similarly, the unemployment rate of males has diverged upward

from that of females since 2007. Klier also noted recent departures from unemployment trends in motor vehicle manufacturing, manufacturing (except motor vehicles), and services. Within the past two years, the unemployment rate in the motor vehicle sector has surged from around 7% to over 25%—twice the increase in the rest of the manufacturing sector and around six times the increase in the services sector. Reviewing unemployment rates by educational attainment in Michigan, Klier stated that the gap between college graduates and non-college-graduates had widened since 2003.

Kristin Dziczek, Center for Automotive Research (CAR), presented some grim unemployment statistics for the automotive industry while tempering them with prospects for a potential mild rebound in automotive employment. From 1999 through August of 2009, Michigan's motor vehicle and parts manufacturing employment declined by 72%, Ohio's by 58%, Indiana's by 48%, and the nation's by 50%. More job cuts are forthcoming in the near term; for example, GM has announced additional job cuts as part of its 2009 year-end restructuring efforts. Dziczek noted that job prospects for laid-off automotive workers are bleak, thanks in part to their inability to conduct a wider geographical job search during this economic downturn; many hold mortgages on Michigan homes that, based on current home values, would require large cash settlements at the time of sale.

On the bright side, Dziczek projected a small hiring rebound in the automotive sector for a couple of reasons. Some auto companies may need to hire back some skilled workers as they implement their restructuring strategies. For example, Chrysler had cut 25% of its salaried workers by the end of 2008, but it is now discussing bringing some of these professionals back because more staff will be needed to bolster the company's new product lineup. Dziczek said she anticipated sales to rebound over the longer term because approximately 87% of workers still drive to work. Moreover, with the number of households projected to increase, demand for vehicles will also increase. According to CAR, new investment, particularly in technological innovations, will be needed to serve the market. Lastly, echoing the sentiments of many professionals in the automotive industry, Dziczek voiced a concern about the future supply of workers. This latest recession has changed the demographics of the automobile industry as many older workers have retired; those who remain may require training to meet the changing skill demands of advanced manufacturing. The sector also faces some challenges in drawing new, young workers into what they may view as an industry in decline. Through its Program for Automotive Labor and Education, CAR is evaluating these work force issues and trying to forecast the specific skills that employees will need five to ten years out.

### Community impact

Howard Wial, Brookings Institution, evaluated the dislocation effect of the auto industry downturn. In examining individual metropolitan statistical areas (MSAs), Wial documented rising unemployment in assembly and parts manufacturing and structural change (i.e., change due to industry-specific factors rather than the business cycle). At the start of the nationwide recession in 2007:Q4, 62 MSAs had at least double the national job concentration of motor vehicle and parts manufacturing employment; Wial deemed these "auto-dependent" regions. Most are located in the auto corridor extending south from Michigan through Tennessee and into the northern parts of Mississippi and Alabama. During the current recession, the employment picture across these 62 MSAs ranged from a loss of 16.3% in Elkhart, Indiana, to a gain of 2.0% in Sandusky, Ohio. Areas with high job losses had three similar characteristics: relatively higher readings of job concentration in motor vehicle and parts manufacturing (five to 35 times the national average), greater dependence on the Detroit Three, and smaller MSA population.

Next, Wial further broke down the 62 MSAs based on characteristics of employment and structural change. Wial found that six MSAs—Charleston, South Carolina; Gainesville, Georgia; Huntsville, Alabama; Indianapolis; Ithaca, New York; and Knoxville, Kentucky—had persistent gains in total employment until the recent downturn; therefore, in his view, an economic recovery would likely restore employment stability to these cities. Of the remaining 56 MSAs, 25 had structural declines, which Wial defined as continual declines in employment in transportation equipment due at least in part to the downsizing of the auto industry between 2001:Q1 and 2009:Q2, a period with two cyclical downturns and an intervening upturn. Wial noted that these 25 MSAs are clustered around the Great Lakes, with the highest concentration of them in and around Detroit. These MSAs have the greatest need for economic redevelopment, Wial said. He further broke down these 25 MSAs into two groups based on their different recovery strategies. Eleven of the 25 have had two employment peaks since 1997, indicating these MSAs contained some industries that have shown patterns of structural growth (industry-specific growth that is not due to the business cycle) and high-value-added manufacturing that public policy should work to retain. The remaining 14 MSAs have experienced persistent total employment declines since the 2001 recession, with widespread job losses in virtually all sectors of manufacturing. Wial argued that, within these 14 MSAs,



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job recovery initiatives should be redirected toward industries with the potential for structural growth, such as education and health care. Wial concluded that there tends to be heterogeneity in the patterns of structural change, which requires heterogeneity in the policies and work force development programs designed to foster economic growth.

### Auto worker outlook

George Erickcek, W. E. Upjohn Institute for Employment Research, investigated some options for displaced auto workers, focusing primarily on team assemblers.[1] First and most obviously, these workers could try to find similar assembly jobs in another manufacturing sector. However, even if successful, they would incur a large wage cut from their previous United Auto Workers (UAW) wage levels. Currently, Erickcek said, temporary employment agencies are employing more assembly workers than any other industry in the country, but at much lower wages than in their previous jobs—e.g., as low as $23,000 per year in Michigan, compared with $50,000–$60,000 per year for a UAW job. Moreover, job opportunities for these workers are shrinking. The number of forecasted annual job openings per year nationwide for auto assembly workers is only about 26,550—enough to cover only a small fraction of displaced workers; most will have to find new occupations and/or industries.

Displaced assemblers could find work in occupations with similar skill sets, such as forest fire fighters, radio operators, riggers, and plasterers and stucco masons. But again, these tend to offer wage rates well below those paid by the Detroit Three, and they have insufficient capacity to take in all the displaced auto workers in Michigan. Consequently, Erickcek argued that the best opportunities for displaced auto workers may be found in higher-skilled manufacturing jobs, but this would require more education and training to acquire the skills to match those desired by niche manufacturers. Such skills acquisition can be an expensive but lucrative investment for workers; that is, it can lead workers to successfully transition to a higher-skilled occupation or sector. Moving auto workers into industries outside of manufacturing also involves training and educational challenges. Erickcek noted that many growing occupations tend to require more social and interactive skills than those needed to be a team assembler. He cited the examples of medical and other service occupations, such as nurse, sales representative, and food service worker.

### Conclusion

The opening panel of the Automotive Communities and Work Force Adjustment conference highlighted the sharp structural decline of the Detroit-based auto industry. Although the reconcentration of the Detroit Three's production capacity in the Midwest will provide some positive effects as auto sales recover, overall prospects appear dim unless domestic automakers reverse their fortunes. Workers and communities tied to this industry will continue to face difficult challenges, even as the nation enters economic recovery. How can federal, state, and nonprofit work force programs assist former auto workers to transition to alternative jobs? We will evaluate some current and prospective programs and initiatives designed to support displaced auto workers in an upcoming *Chicago Fed Letter*.

[1] Team assemblers work as part of a team to assemble an entire product or component of a product; each team assembler can perform all the different tasks in the assembly process.