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A photograph of an industrial robotic welding process. Several robotic arms are visible, with one in the foreground actively welding a metal component, creating a bright, starburst pattern of orange and yellow sparks. The background shows other robotic arms and industrial equipment in a dimly lit factory setting. The image is framed by a large, diagonal red and white graphic element that cuts across the top and bottom of the page.

BUSINESS OUTLOOK *for* West Michigan

W.E. UPJOHN INSTITUTE FOR
EMPLOYMENT RESEARCH

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BUSINESS OUTLOOK

for West Michigan

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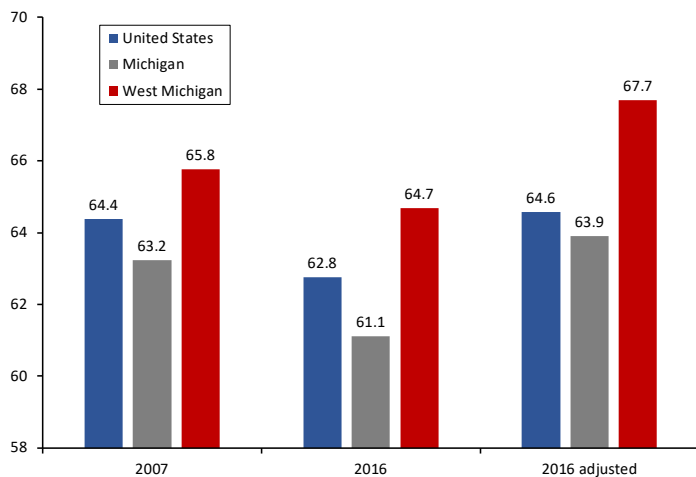
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WEST MICHIGAN VIEWPOINT

This edition of *Business Outlook* offers a retrospective on the Great Recession, its aftermath, and how elements of the economy have changed over the past 10 years. In particular, the issue examines how the recession affected labor force status, employment change, auto manufacturing, housing construction, and other aspects, and where they stand currently.

Michigan Labor Force Participation Rate, 2007 and 2016



The third set of bars shows how the labor-force participation rates in 2016 for national, state and west Michigan would have been affected if the age distribution that existed in 2007 had stayed the same. Under this hypothetical, the nation and the state of Michigan experience growth of only a few tenths of a point from 2007, but west Michigan shoots up by nearly two points, to a labor-force participation rate approaching 68 percent.

SOURCE: U.S. Census American Community Survey (ACS).

The Great Recession officially began in December 2007 and persisted through May 2009. In June of that year, it hit its trough and began an expansion that is approaching the second-longest in U.S. history. In this edition, we refer to 2007 generally as the high point before the recession started, and 2009 as the depth of the recession.

Across the United States, across Michigan, and across the west Michigan region, elements of the economy such as employment and housing starts rose and fell differently in this 10-year period. Have we made up the economic ground that was lost during the 18 months of the recession, before recovery started in June 2009? That is the question this issue is devoted to examining from various perspectives—national, state, region, and local metropolitan area.

Here in west Michigan, employment has largely recovered. In 2007, right before the Great Recession, unemployment stood at 6.3 percent. Currently, the unemployment rate for west Michigan is 4.1 percent, the same as the nation's and lower than the state's, which is 4.5 percent. As of last quarter, there are 39,000 people in our area of west Michigan considered unemployed and looking for work, and, according to Burning Glass Technologies, a database of online job postings, there are 40,184 job openings. In comparison, in 2007 there were 58,738 people in west Michigan unemployed and 68,175 job openings.

The other part of the employment equation is the labor-force participation rate (LFPR)—the share of people 16 and over in the economy who are part of the labor force—in other words, either working or looking for work. West Michigan has outpaced both the nation and the state in LFPR (see figure above). According to the Bureau of Labor Statistics, west Michigan had a higher LFPR in 2007 (65.8 percent) than in 2016 (64.7 percent). (Final figures for 2017 aren't available yet.) However, the folks that accounted for the higher LFPR in 2007 were nine years older in 2016, and some of them had by then, of course, retired.

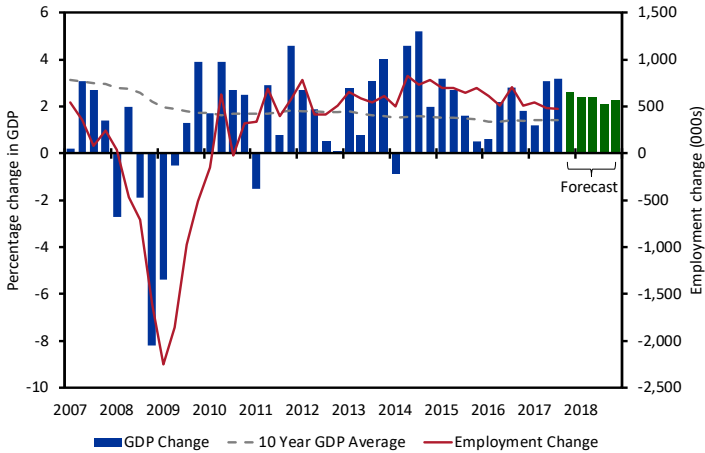
So the theoretical question arises: if the various age cohorts had kept the same percentages of the overall age distribution in 2016 as they made up in 2007, how would that affect the LFPR, assuming we kept constant the current age-based participation rates for each age cohort? The impact is dramatic. Using this approach, west Michigan would increase 3.0 percentage points, to a rate of 67.7 percent—far more than nationally or statewide.

That hypothetical would translate into another 196,000 workers to fill job openings currently going wanting, if somehow the demographics could reverse course. But with the baby boomers inexorably reaching retirement age, west Michigan needs to find another solution to its tight labor market.

NATIONAL ECONOMY

In this issue, we are taking a retrospective look at the national and regional economy since 2007. It was in December of 2007 that the economy plunged into the Great Recession, which officially lasted until it hit bottom in June 2009. From then on, the economy has been in an expansion and is within a few months of becoming the second longest expansion since business cycles started being recorded in 1854. Some think the pace has been too slow, but we find that the long upward trend has placed the U.S. and Great Lakes economies on firm footing.

Gross Domestic Product and Nonfarm Employment



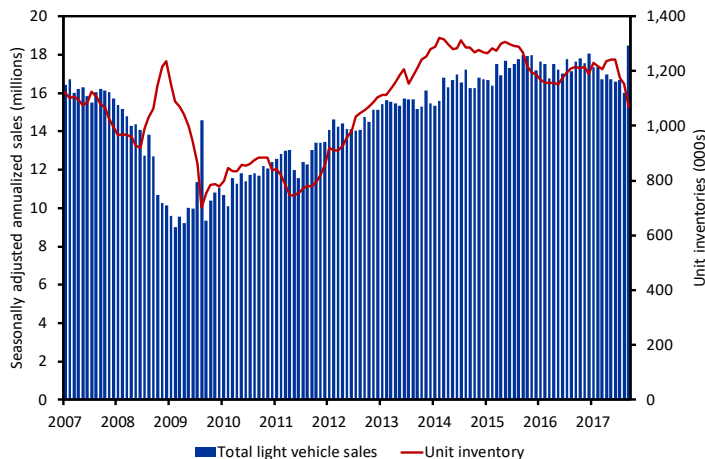
Forecasts have GDP showing steady if unspectacular growth at somewhere above 2 percent for the rest of 2018.

In 2007, GDP got off to a slow start for the year (0.2 percent), did well in the second and third quarters (3.1 percent and 2.7 percent, respectively), then slid to 1.4 percent in Quarter 4. It turned negative in the first quarter of 2008. Similarly, in 2017, the year started off slowly at 1.2 percent, and the middle two quarters showed strength at 2.2 percent and 2.8 percent. However, that's where the patterns diverge: estimates from the Bureau of Economic Analysis peg fourth-quarter growth at 2.6 percent, nearly twice as good as in 2007, and forecasters predict GDP will remain above 2.0 percent in 2018.

The job numbers are vastly different between the two years: Employment in 2007 averaged only 96,000 new jobs a month and totaled 1.5 million for the year. January (240,000) and March (190,000) showed strong growth, but as the year wore on, other months, such as July (-34,000) and August (-20,000) saw employment losses.

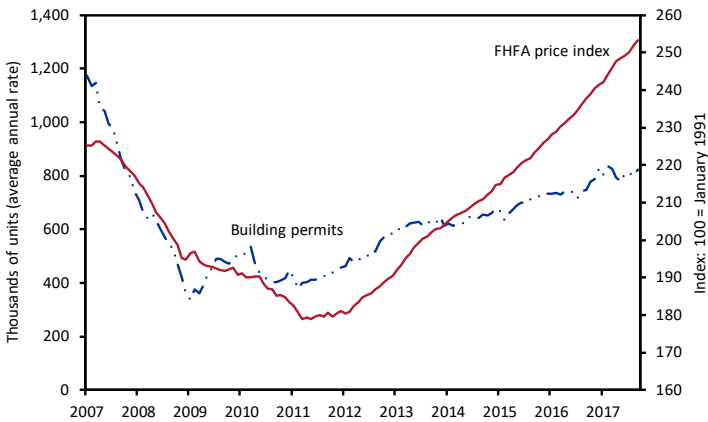
In contrast, in 2017, employment growth averaged 175,000 jobs a month and totaled almost 2.1 million jobs.

U.S. Light Vehicle Sales and Inventories



Light vehicle sales have made a long, steady climb since the low point was reached in early 2009, but they now appear to be leveling off. The spike in the most recent month shown is an outlier, spurred by replacement of vehicles damaged in the hurricanes.

Single-Family Building Permits and Index of Existing Home Prices



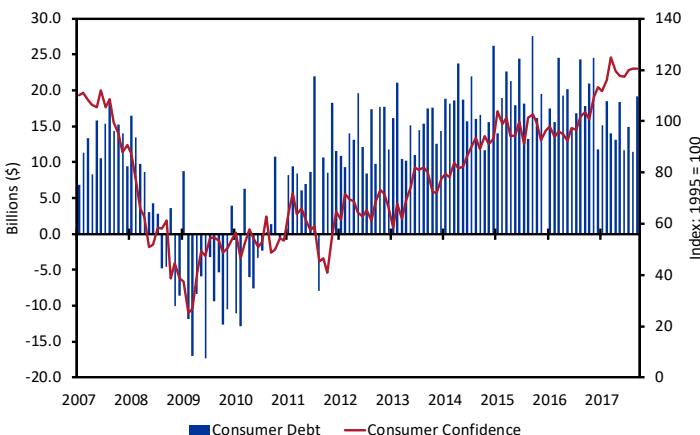
Building permits for single-family homes have spent seven years on the rise but have yet to return to prerecession levels. Home prices, on the other hand, are zooming.

How did consumer markets do in 2017 compared to 2007? Light vehicles (cars, light trucks, and CUVs/SUVs) in 2007 sold 16.1 million units. However, going into 2008, sales declined, and they did not begin to rebound until mid-2009 (bottom figure, opposite page). In 2017, light-vehicle sales recovered to 17.2 million units.

The national housing market tells an interesting story when one compares prerecession activity and prices with current conditions. Early in 2007, permits for single-family housing stood at an annualized rate of 1.2 million units, but they declined to just under 750,000 permits by the time the recession was declared in December, and they hit bottom in January 2009 at 337,000 (figure above). Since then, housing permits issued have returned to the 2007 levels, averaging 809,000 for the first nine months of 2017, but have not yet returned to the much higher prerecession levels of more than a million permits. However, on the price side, the index of home prices reported by the Federal Reserve Bank of New York shows prices to be much higher now than when the recession began. The index, pegged to the year 1991, was at 225 in January of 2007 and fell to 178 for a number of months in 2011. It has since rebounded to an average of 248 for the first nine months of 2017.

Consumer confidence has also surpassed prerecession levels (figure below). The index was at 97.9 in the last half of 2007 and plummeted to 25.0 in early 2009. Early this year, it rebounded to prerecession levels, at 111.0, and by November 2017 the index had risen to 129.5. For household debt, the prerecession marks from the fourth quarter of 2007 (\$12.37 trillion in debt) and the third quarter of 2017 (\$12.93 trillion) are similar. So what has changed? In 2007, housing debt was 78.8 percent (\$9.75 trillion) and nonhousing debt (auto loans, credit cards, student loans, etc.) was 21.18 percent (\$2.62 trillion). By 2017, the share of housing debt had dropped to 71.0 percent (\$9.19 trillion) and nonhousing debt had ballooned to 29.0 percent (\$3.76 trillion).

Consumer Confidence and Change in Consumer Debt

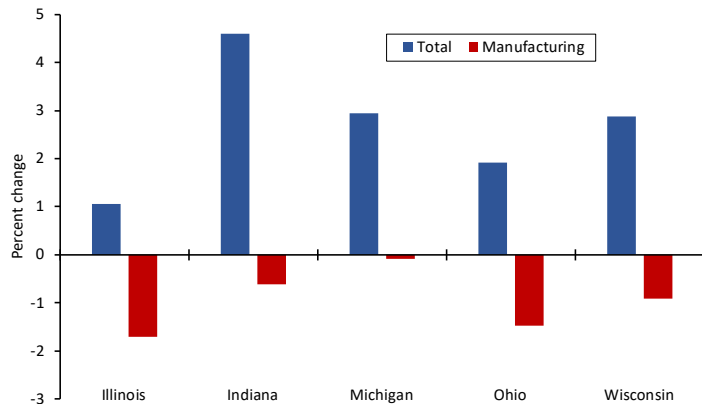


Consumer confidence continues to climb during what is now approaching the second-longest expansion in U.S. history.

GREAT LAKES ECONOMY

All five states in the Great Lakes region have fully recovered from the Great Recession, at least in terms of overall employment numbers. The figure shows every state's employment level in 2017 as having risen above the baseline of 2007, the year the Great Recession started. Indiana has seen the largest employment growth in terms of percentage, at 4.6 percent. Michigan and Wisconsin had the second-highest gains, increasing by 2.9 percent. However, Michigan employment also had fallen the furthest prior to the Great Recession, shedding 9 percent of its jobs from 2001 to 2007. Illinois posted just a 1.1 percent gain since 2007. Ohio posted just a 1.1 percent gain since 2007.

2007 to 2017 Employment Change



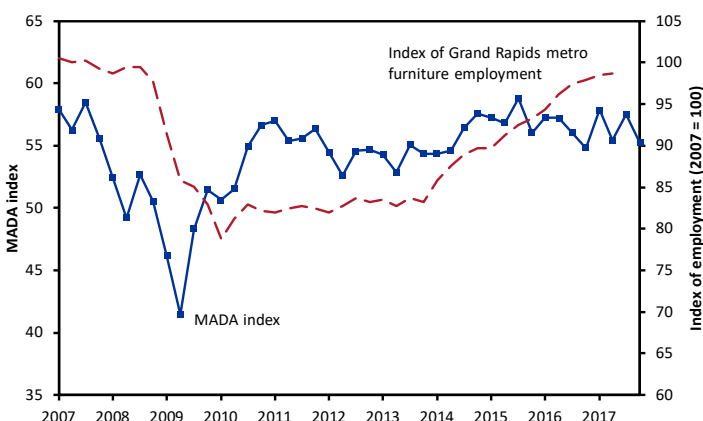
Manufacturing employment suffered during the Great Recession, losing 234,000 jobs. Whereas in total employment every state in the region made a full recovery and then some, no state fully recovered when only manufacturing employment was considered—all five have fewer manufacturing workers now than they did before the recession began. Michigan came the closest to returning to its 2007 level, at just 0.1 percent off the baseline.

OFFICE FURNITURE INDUSTRY

Since the end of the Great Recession, the furniture industry has been in a state of slow and steady growth. The Michael A. Dunlap and Associates (MADA) index fell steeply from 2007 to 2009, but it quickly rebounded as the expansion began in midyear 2009, returning to values over 50 (indicating growth in the global industry) by 2010 (figure below).

However, the employment situation in the Grand Rapids area has not been as responsive. The MADA index measures the worldwide industry, but the accompanying local employment index did not follow the global trend. Instead, it lagged behind, remaining at nearly 20 percent lower than the 2007 baseline until 2014. Only in late 2017 did employment in furniture production return to the baseline 2007 level.

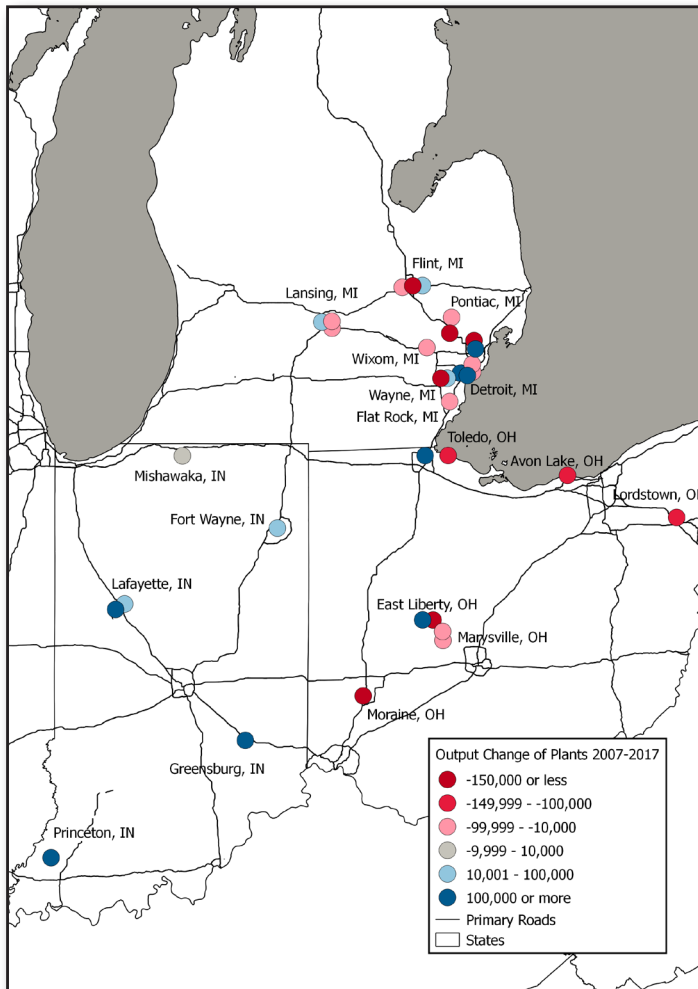
MADA Office Furniture Industry Index and Index of West Michigan Furniture Industry Employment



The furniture industry has enjoyed a sustained period of growth that shows no sign of abating. The employment decline in Grand Rapids, however, trailed behind the global index decline by several quarters. The local employment index did not reach bottom until after the industry as a whole had begun to grow again. Now it has nearly reached its baseline, set before the last recession.

AUTO INDUSTRY UPDATE

The Great Recession had a big impact on the automobile industry, but the industry's restructuring started at the beginning of the century and had shed almost as many workers before the recession began as were laid off during the recession. With federal help for General Motors after the recession, the U.S. auto industry has emerged stronger today than even 17 years ago. More vehicles are coming off the assembly line today than did right before the recession hit in 2007, even as the types of vehicles Americans are purchasing switch from cars to pickups, sport utility vehicles (SUVs), and crossover vehicles (CUVs).



SOURCE: W.E. Upjohn Institute and *Automotive News*.

2017, the share for both the United States and Canada had dropped by more than 4 percentage points, to 65.7 and 12.2, respectively. The beneficiary, of course, was Mexico, whose share had grown to 22.1 percent.

Regionally, too, production has moved southward, as Michigan has lost share to Indiana since 2007 (see map). Michigan declined from 14 percent of North American production (or 2.14 million units) in 2007 to 12.24 percent in 2017.

The great unknown that could affect future investment decisions would be changes coming out of the current round of renegotiations on the North American Free Trade Agreement (NAFTA). The University of Michigan's Research Seminar for Quantitative Economics (RSQE) has suggested that if significant trade barriers were put in place, production in Mexico, which is often exported to the rest of the world, may move out of Mexico and into the Pacific Rim.

Last year, North American production of light vehicles totaled an estimated 17.4 million units, according to *Automotive News*, compared to 15.5 million units in 2007. It also represents quite a comeback from 2009, when total production dropped to 8.8 million units.

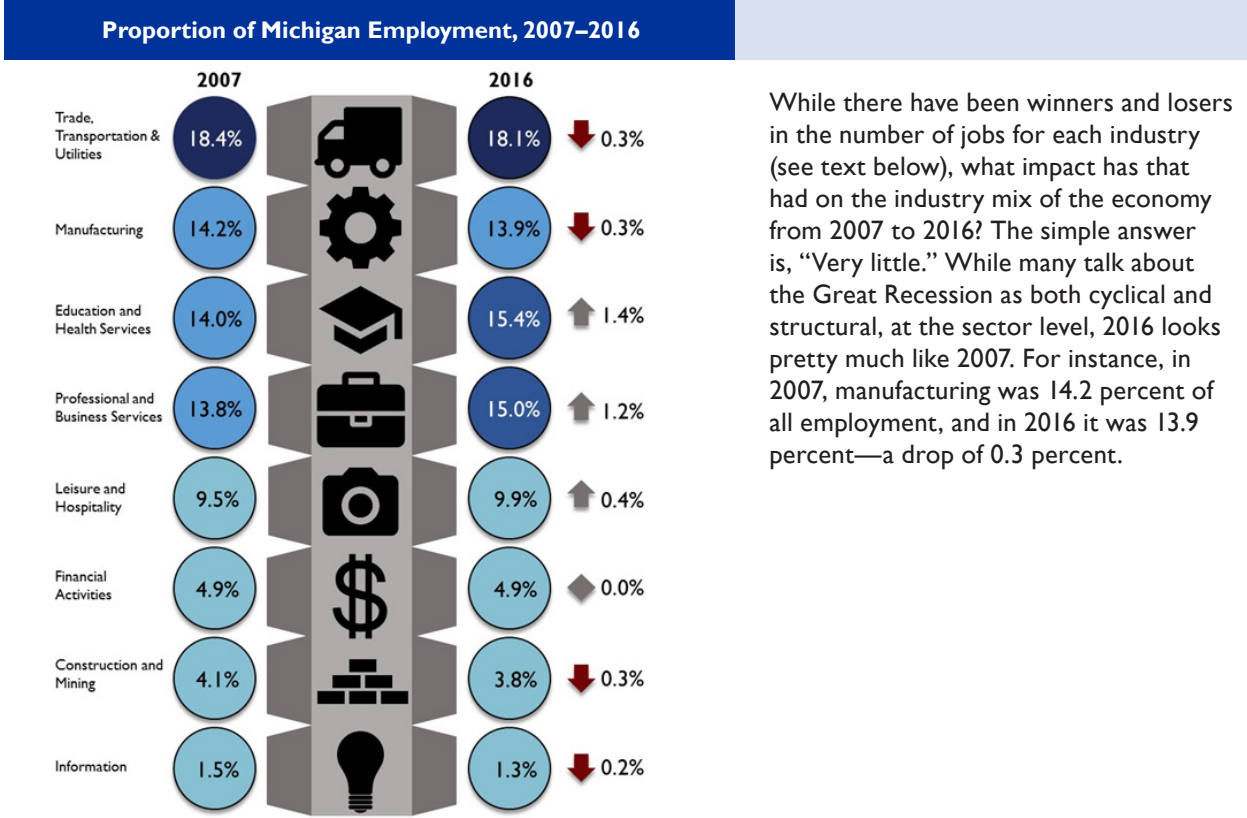
There have been two main changes to the industry over the past decade: 1) where vehicles are made and 2) the distribution of types of vehicles. Let's take the second one first. Shares of production by type of vehicle are noticeably different from 2007. That year, 43.2 percent of North American production was in cars; the rest in light trucks or SUVs/CUVs. By 2017, only 34.5 percent of production was in cars, and 65.5 in trucks. This change holds true for Michigan as well, where the percentages of cars and light trucks produced in 2007 and 2017 were almost identical to the national shares.

Moreover, less of the light-truck production is happening in this country. In 2007, the United States accounted for 78 percent of trucks produced. By 2017, that percentage had dropped to 71. The change was less drastic in the U.S. share of production of cars, which fell only slightly, from 57.0 percent to 55.7.

This reflects the second big change: production shifting to Mexico. In 2007, 69.9 percent of all North American vehicle production was based in the United States; the rest was split between Canada (16.6 percent) and Mexico (13.5 percent). But by

STATE OF MICHIGAN ECONOMY

Comparing Michigan’s economy in 2007, on the brink of the Great Recession, to where it is now, we see that it has fully recovered and then some. Employment is nearly 4 percent higher than it was in 2007, and real GDP is almost 10 percent higher. While employment in 30 states has recovered more since 2007 than employment in Michigan, it should be recognized that employment fell more in Michigan than in any other state but three. Michigan lost 416,000 jobs between December 2007 and July 2009, when the state’s employment hit bottom. Output followed a similar downward spiral, losing 12 percent of its output from the fourth quarter of 2007 before it began its long road back to prerecession levels.



While there have been winners and losers in the number of jobs for each industry (see text below), what impact has that had on the industry mix of the economy from 2007 to 2016? The simple answer is, “Very little.” While many talk about the Great Recession as both cyclical and structural, at the sector level, 2016 looks pretty much like 2007. For instance, in 2007, manufacturing was 14.2 percent of all employment, and in 2016 it was 13.9 percent—a drop of 0.3 percent.

SOURCE: Bureau of Labor Statistics, Current Employment Statistics.

Not until the middle of 2015 did the state return to its level of employment at the end of 2007, although output returned to its prerecession level a year earlier. Manufacturing took an even bigger hit initially, with output dropping 38 percent, but returned to December 2007 levels much earlier than the overall economy, even though it then sputtered for a number of years before turning upward more recently.

But if we move the yard markers back to 2000, the year prior to the 2001 recession, and use that as our base year, it’s a different story: between that year and the start of the Great Recession in 2007, Michigan lost about 407,000 jobs, out of a total employment of 4.68 million. Nearly 80 percent of those jobs, 323,158, were in the goods-producing sector, which includes construction and manufacturing. The vast majority of those 407,000 jobs have not returned. So by that measure, even though the state held its own in the recent “Great Recession,” the previous recession proved a greater challenge to surmount.

Even in the most recent recession and subsequent recovery, although the overall employment numbers have recovered, within that total there have been winners and losers: some sectors have gained employment in the state while others have lost. For example, manufacturing lost about 7,400 jobs between 2007 and 2016. But within manufacturing, there were winners and losers: for instance, durable goods, comprising industries such as autos and furniture, lost 15,100 jobs, but nondurable goods gained 7,600 jobs. Retail trade lost 17,500 jobs, but

Michigan Statistics (seasonally adjusted)

Measure	2016	2009	% change, 2009-2016	2007	% change, 2007-2016
Employment (by place of work)					
Total nonfarm employment	4,325,600	3,870,840	11.7	4,261,190	1.5
Goods-producing	762,930	589,410	29.4	781,980	-2.4
Natural resources and mining	7,170	6,910	3.8	7,670	-6.5
Construction	155,570	127,600	21.9	166,680	-6.7
Manufacturing	600,190	454,900	31.9	607,630	-1.2
Durable goods	451,860	334,120	35.2	466,960	-3.2
Nondurable goods	148,330	120,780	22.8	140,670	5.4
Private service-providing	2,962,000	2,634,660	12.4	2,823,530	4.9
Trade, transportation, and utilities	781,570	717,210	9.0	787,040	-0.7
Transportation and utilities	137,380	112,870	21.7	128,280	7.1
Wholesale trade	172,010	152,920	12.5	169,030	1.8
Retail trade	472,180	451,420	4.6	489,730	-3.6
Information	57,450	56,340	2.0	62,940	-8.7
Financial activities	212,880	191,380	11.2	209,480	1.6
Professional and business services	650,020	509,980	27.5	590,790	10.0
Educational and health services	664,810	609,230	9.1	596,660	11.4
Leisure and hospitality	425,670	381,680	11.5	407,020	4.6
Other services	169,600	168,840	0.5	169,600	0.0
Government	600,670	646,770	-7.1	655,680	-8.4
Unemployment					
Number unemployed	238,430	676,040	-64.7	355,500	-32.9
Unemployment rate (%)	5.0	13.8		7.1	
State indexes (1996 = 100)					
Local components					
UI initial claims	9,229	53,250	-82.7	17,085	-46.0
New dwelling units ^a	19,292	6,994	175.8	18,263	5.6

NOTE: Employment numbers for durable, nondurable goods, transportation and utilities, wholesale trade, and retail trade are seasonally adjusted by the W.E. Upjohn Institute. Other numbers are seasonally adjusted by the Bureau of Labor Statistics. Categories may not sum to total due to rounding.

^aSeasonally adjusted annual rates.

SOURCE: W.E. Upjohn Institute for Employment Research. Based on dwelling data from DODGE Data & Analytics; and on employment data from the Michigan Department of Technology, Management and Budget; Bureau of Labor Market Information and Strategic Initiatives.

health care and social assistance picked up 73,000. The table shows the effects the economic recovery has had on Michigan. Overall employment has grown from prerecession levels by 1.5 percent, and by 11.7 percent since the depths of the recession in 2009. The economy added 64,400 jobs since 2007 and 454,760 since 2009.

The last recession was thought to be both cyclical and structural. In particular, manufacturing was thought to be gone and not likely to return. Between 2007 and 2009, this sector lost more than 150,000 jobs, on top of a lengthy decline in employment since the previous recession. While not completely back to its prerecession levels, the sector is down only 1.2 percent between 2007 and 2016, or 7,630 jobs.

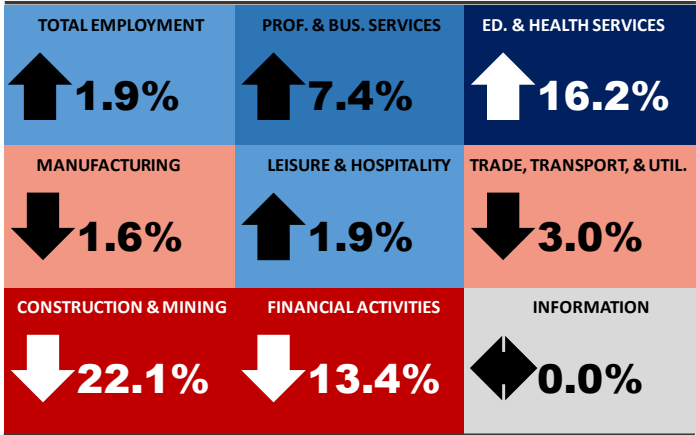
Tight labor markets in 2017 had only 238,430 people seeking work, fewer than 2007 (355,500) and well down from 2009 (646,770). The state unemployment rate went from 7.1 percent in 2007 to 13.8 percent in 2009 to 5.0 percent in 2016. New home construction, at 19,292 units, has surpassed its 2007 level of 18,263.

So, has Michigan fully recovered from the Great Recession? The state's economy looks much as it did, at least from an employment perspective, prior to the recession. But there have been gains and losses in industries and, to a lesser extent, in sectors. It likely depends on one's perspective.

BATTLE CREEK MSA

Battle Creek has largely recovered from the Great Recession: from 2007 to 2016, employment in the Battle Creek area grew by 1.9 percent, or 1,100 persons. That’s a significant boost from the trough of the recession, which occurred in mid-2009, when Battle Creek had lost 5,500 workers. However, not every industry has regained employment losses. The construction industry is 22 percent below 2007 employment and the financial sector is down 13 percent. Balancing out losses from those two industries is the education and health services industry, which gained 16 percent. While not shown in the figure, durable goods employment is above the 2007 level, but nondurable goods is below.

Battle Creek Employment Change, 2007–2016

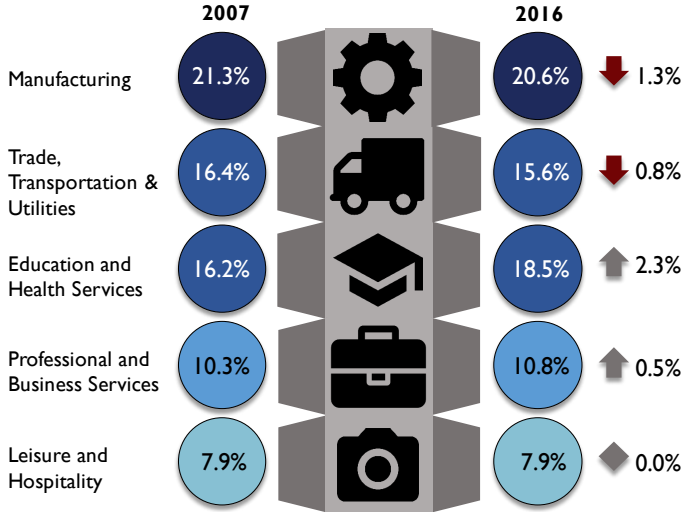


Education and health services buoyed Battle Creek employment, while construction and financial activities dragged it down. Overall, the area came out ahead.

SOURCE: Bureau of Labor Statistics, Current Employment Statistics.

The composition of employment has shifted slightly in Battle Creek. Some of the biggest industries have contracted as a proportion of total employment. Manufacturing remains the largest industry, at 20.6 percent of employment, but it has fallen 0.7 points from 2007. Trade, transportation, and utilities employment is down by 0.8 percent.

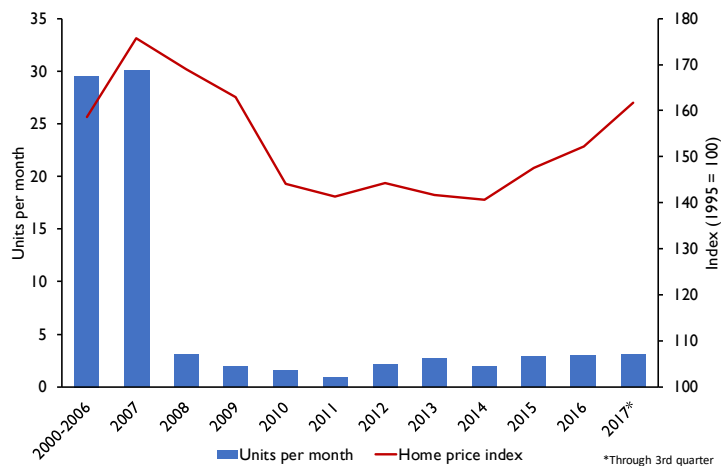
Proportion of Employment in Top 5 Industries, 2007–2016



Slight changes to the mix of industry employment in the Battle Creek area show manufacturing and trade yielding 0.7 and 0.8 percent share, respectively, while the education and health services sector picks up 2.3 percent and professional and business services 0.5 percent.

SOURCE: Bureau of Labor Statistics, Current Employment Statistics.

Battle Creek Housing Units and Prices



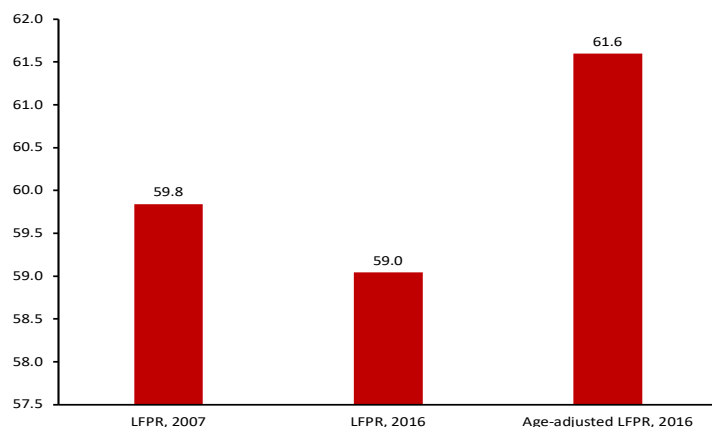
The new housing starts are markedly different for Battle Creek from those of the other parts of west Michigan: they are consistently high until the onset of the Great Recession, then they plummet and never recover.

The blue bars in the figure show average new housing starts per month in the Battle Creek MSA, as compiled by Dodge Data and Analytics. The figure's red line shows the home purchase price index from the Federal Housing Finance Agency (FHFA). The pace of construction from 2000 to 2006 was just under 30 units per month. During the same period, the price index was at 159, meaning prices were 59 percent above their level in 1995. In 2007, just as the recession was looming, the pace of construction was similar, and the price index had increased to 176 because of the housing bubble. In 2008, with the bursting of the bubble, new home construction dropped to single digits per month and has not recovered. Prices fell through 2011 and flattened until 2015, but rising prices in the most recent years have not been enough to spur new construction.

In previous issues of *Business Outlook*, we looked into labor-force participation, meaning the percentage of individuals employed or unemployed in the whole population 16 and over, and the effects of the aging workforce. In this issue, we examine the *relationship* of these two elements—in other words, the effect that the aging of the workforce has had on the labor-force participation rate. We accomplish this by using an age-adjusted rate.

The age-adjusted labor-force participation rate replaces the age distribution in 2016 with that of 2007, while still using the labor-force rates for each age cohort in 2016. In Battle Creek, labor-force participation fell from 59.8 in 2007 to 59.0 in 2016. However, if the age distribution had remained the same, the labor-force participation rate would have risen to 61.6, suggesting that the declining labor force is due to an aging population.

Labor-Force Rates—2007, 2016, and Age-Adjusted 2016



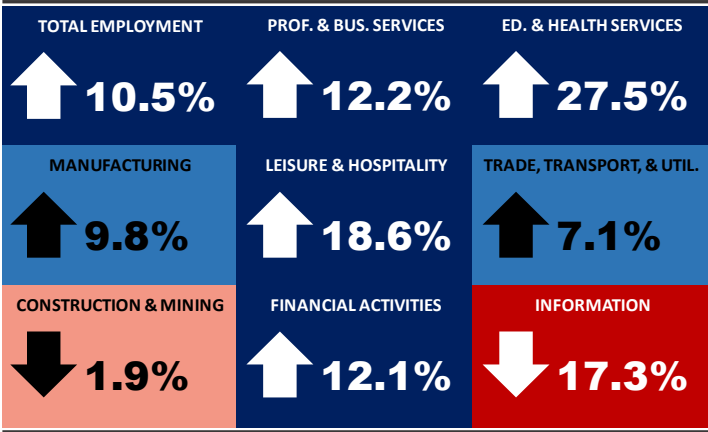
Battle Creek's age-adjusted labor-force participation rate increased nearly two points from the unadjusted 2007 rate when the 2007 population distribution was substituted for the 2016 distribution. This may indicate that Battle Creek's workforce was a bit older than those of other MSAs.

SOURCE: U.S. Census American Community Survey (ACS).

GRAND RAPIDS–WYOMING MSA

Grand Rapids has made a robust recovery from the Great Recession, during which the area lost about 47,000 jobs. Total employment has grown by over 10 percent since 2007, led by growth in the education and health sector, which has increased by 27.5 percent. A crisis in the housing industry kicked off the Great Recession, and construction employment has not fully recovered, as it is down by nearly 2 percent from 2007. However, most other industries have improved.

Grand Rapids Employment Change, 2007–2016

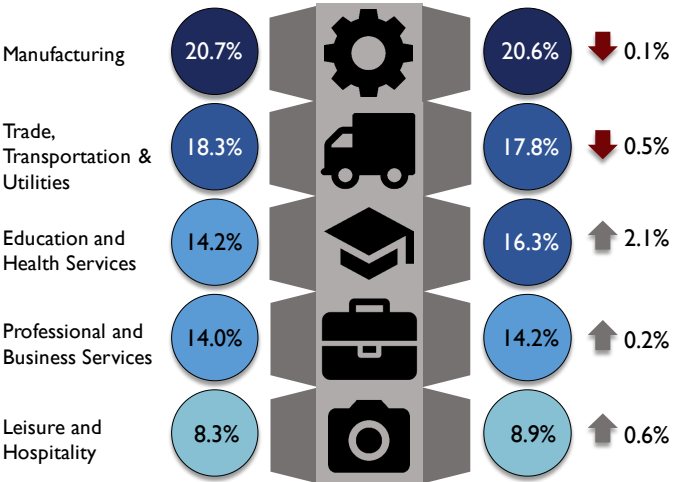


Judging from the amount of deep blue on the page, things are going pretty well in Grand Rapids. Total employment is up more than 10 percent in a decade.

SOURCE: Bureau of Labor Statistics, Current Employment Statistics.

The Great Recession did not structurally change the employment composition in Grand Rapids: manufacturing remains the largest industry, and its percentage, 20.6 percent of employment, has contracted by just 0.1 percent, from 20.7 percent of employment. Only education and health services shifted more than 1 percent, increasing from 14.2 percent to 16.3 percent of employed.

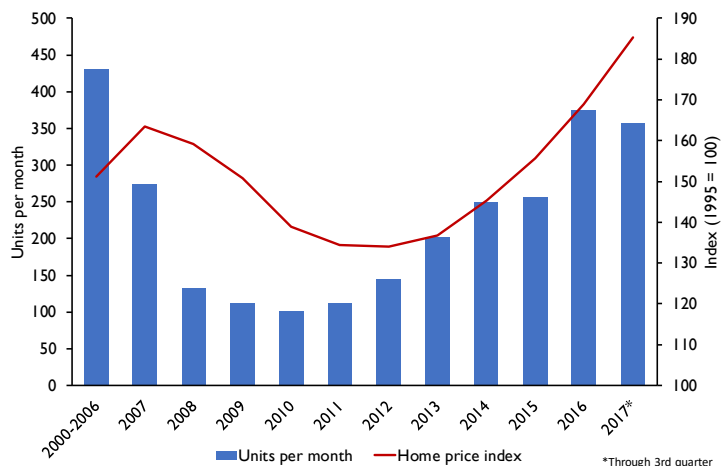
Proportion of Employment in Top 5 Industries, 2007–2016



The mix of major industries has been fairly stable in Grand Rapids over the past decade, although the education and health services sector has seen a big increase.

SOURCE: Bureau of Labor Statistics, Current Employment Statistics.

Grand Rapids–Wyoming Housing Units and Prices



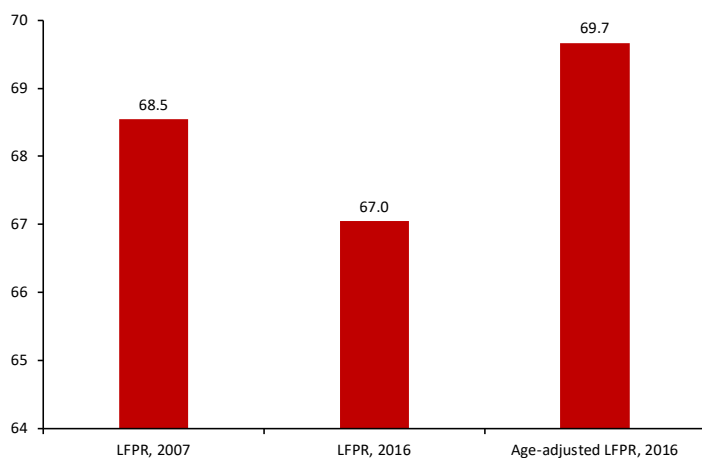
New home starts dropped off slightly last year after years of increases since bottoming out in 2010. However, prices have maintained their steep rise.

The blue bars of the figure show new housing starts in the Grand Rapids–Wyoming MSA as compiled by Dodge Data and Analytics, and the red line traces the home purchase price index from the Federal Housing Finance Agency (FHFA). The pace of new home construction slowed in 2007 from the 2000–2006 average. At the same time, prices soared. After 2008, prices tailed off until 2012—well after the recession ended in mid-2009. Since then, prices have made a dramatic recovery, zooming upwards far beyond the 2007 peak. The pace of construction has not exceeded the 2000–2006 average but is well above the 2007 level.

In previous issues of *Business Outlook*, we looked into labor-force participation, meaning the percentage of individuals employed or unemployed in the whole population 16 and over, and the effects of the aging workforce. Here, we examine the *relationship* of these two elements—i.e., the effect that the aging of the workforce has had on the labor-force participation rate. We do this by using an age-adjusted rate.

The age-adjusted labor-force participation rate shifts the age distribution in 2016 to that of 2007, while still using the labor-force rates for each age group in 2016. The labor-force participation rate contracted from 68.5 percent in 2007 to 67.0 percent in 2016. However, if the age distribution of the population had remained the same as it was in 2007, the labor-force participation rate would have risen to 69.7 percent, because a greater percentage of the population would now be of retirement age. The adjusted rate suggests that age, more than the economy, has driven down the labor-force participation rate.

Labor-Force Rates—2007, 2016, and Age-Adjusted 2016



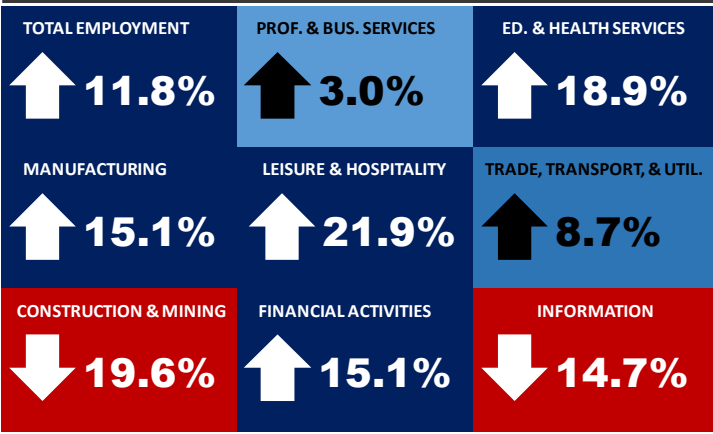
Had the demographics for the different age groups remained the same over the past decade, the labor-force participation rate would have risen (third bar). In actuality, it fell (second bar), because more workers aged out of the workforce than replaced them.

SOURCE: U.S. Census American Community Survey (ACS).

HOLLAND—OTTAWA COUNTY

Ottawa County recovered nicely from the Great Recession. Overall, employment is up by 11.8 percent from 2007 to 2016. Leisure and hospitality employment rose by nearly 22 percent, and education and health services increased by nearly 19 percent. While manufacturing has struggled nationwide, in Ottawa County it is up by 15.1 percent. In spite of the comeback made by housing construction, discussed in detail below, the construction and mining sector is 19.6 percent below its 2007 employment mark.

Holland Employment Change, 2007–2016

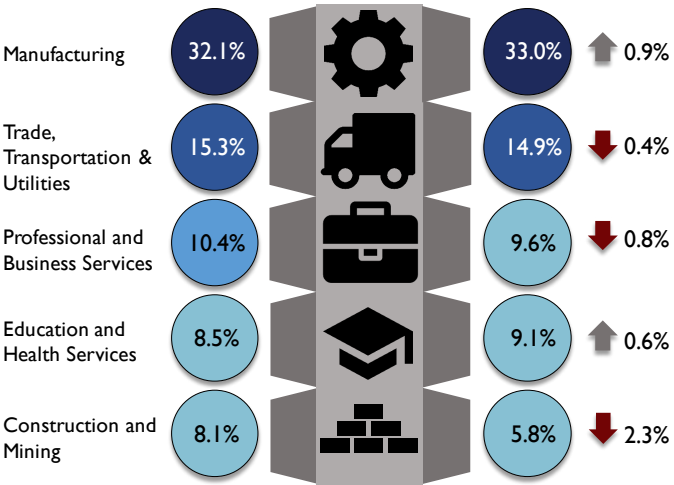


Ottawa County shows some very nice increases, and none more impressive than manufacturing, which rose by 15 percent despite falling in many areas of west Michigan and the nation.

SOURCE: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Holland had an extremely high concentration of manufacturing in 2007, and the percentage has gone up since then. In 2016, manufacturing was nearly a third of total employment. Looking at the other industries in the top five, the employment distribution appears fairly similar to 2007, with the exception of the slide in construction and mining employment, which lost 2.3 percent.

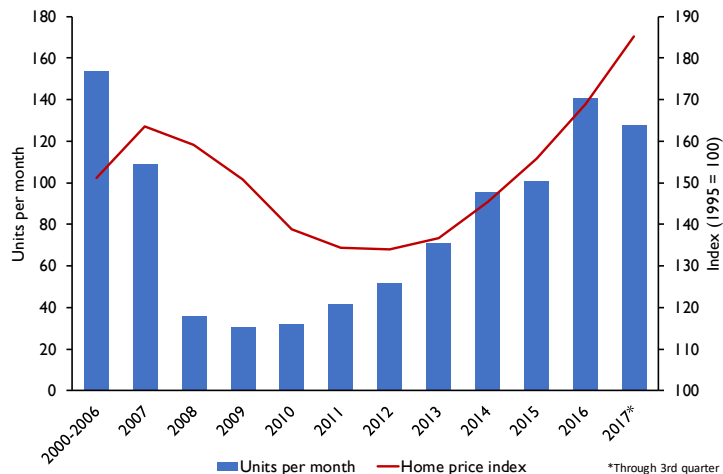
Proportion of Employment in Top 5 Industries, 2007–2016



The top five industries in Ottawa County show a relatively stable makeup, with only construction losing much ground.

SOURCE: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Holland–Ottawa County Housing Units and Prices



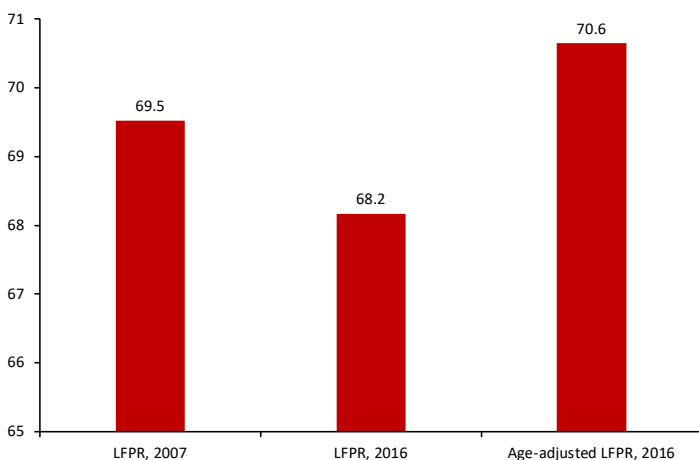
Since 2009, the number of new homes being built in Ottawa County has jumped from around 30 to more than 120.

The figure's blue bars chronicle new housing starts in Ottawa County, as compiled by Dodge Data and Analytics, and the figure's red line depicts the home purchase price index from the Federal Housing Finance Agency (FHFA). Note that the price data are for the metropolitan statistical area of Grand Rapids–Wyoming, whereas the new home starts are for Ottawa County. The pace of construction began picking up in 2011 but has not quite reached the 2000–2006 average. Prices in this figure include the whole of the metro area, including Kent County. They have risen dramatically, although lagged from when the pace of construction increased.

In previous issues of *Business Outlook*, we looked into labor-force participation, meaning the percentage of individuals employed or unemployed in the whole population 16 and over, and the effects of the aging workforce. Here we examine the *relationship* of these two elements—in other words, the effect that the aging of the workforce has had on the labor-force participation rate. We accomplish this by using an age-adjusted rate.

The age-adjusted labor-force participation rate shifts the age distribution in 2016 to that of 2007, while still using the labor-force rates for each age cohort in 2016. The labor-force participation rate shrank from 69.5 percent to 68.2 during 2007–2016, pushed down by an aging population. If the age distribution had remained the same, the labor-force participation rate would have risen by more than a point from 2007.

Labor-Force Rates—2007, 2016, and Age-Adjusted 2016



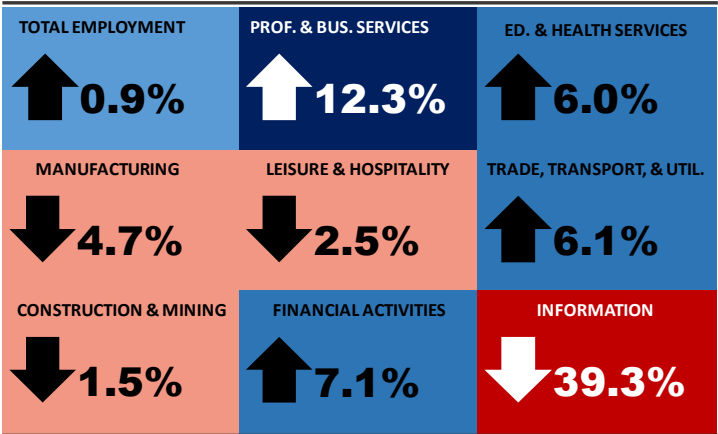
Had the age distribution remained constant from 2007 to 2016 instead of shifting toward the older age cohorts, the labor-force participation rate would have come out nearly two-and-a-half points higher than in actuality.

SOURCE: U.S. Census American Community Survey (ACS).

KALAMAZOO-PORTAGE MSA

Employment in Kalamazoo is little changed from 2007. From that year through the Great Recession and afterward, Kalamazoo shed more than 11,000 jobs, or 8 percent of its workforce. Employment took several years to recover, and by 2016 it was only 0.9 percent above the 2007 annual average. Within industries, there has been some contrast. Professional and business services improved by 12.3 percent from before the Great Recession. Manufacturing, however, is down by 4.7 percent.

Kalamazoo Employment Change, 2007–2016

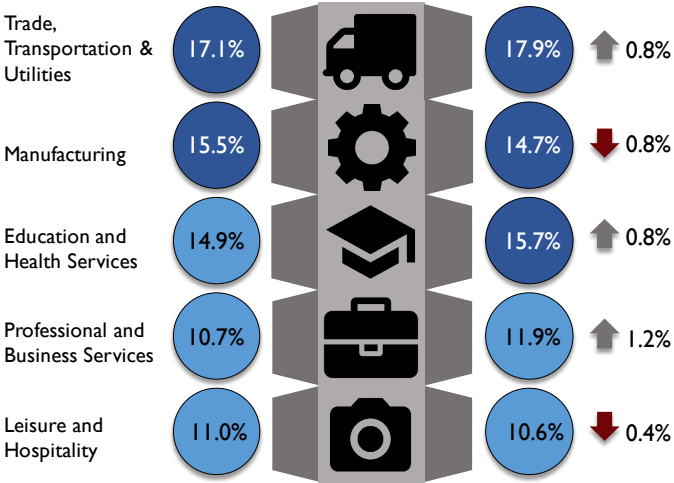


The varied color distribution in the squares of this figure reveal that employment in the Kalamazoo-Portage area has been a real mixed bag over the past decade. The area emerged from the decade with slightly less than a 1 percent gain in employment.

SOURCE: Bureau of Labor Statistics, Current Employment Statistics.

In examining the distribution of employment, we see that, in spite of diverging trajectories in growth, the composition of industries looks very similar from 2016 to 2007. Trade, transportation, and utilities make up the largest industry, at 17.9 percent of the employment. Of the top five industries, the only industry to gain or lose more than 1 percent as a share of the total was professional and business services, which picked up 1.2 percent.

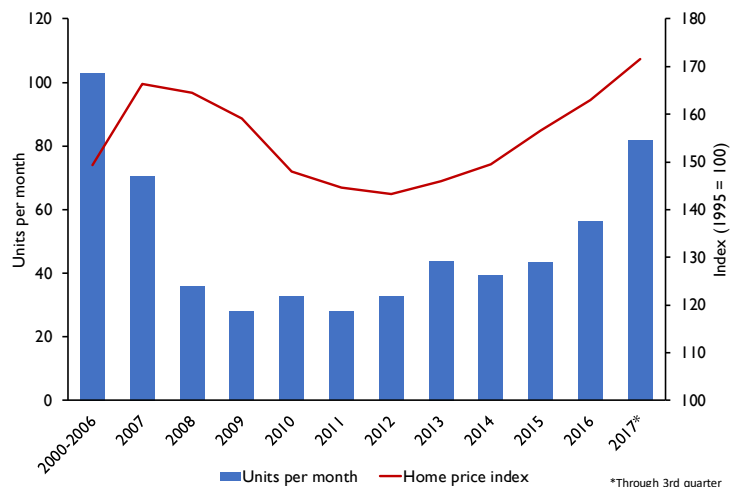
Proportion of Employment in Top 5 Industries, 2007–2016



The trade, transportation, and utilities sector remains top dog, but the top three industries are relatively evenly distributed in their share of the total.

SOURCE: Bureau of Labor Statistics, Current Employment Statistics.

Kalamazoo-Portage Housing Units and Prices



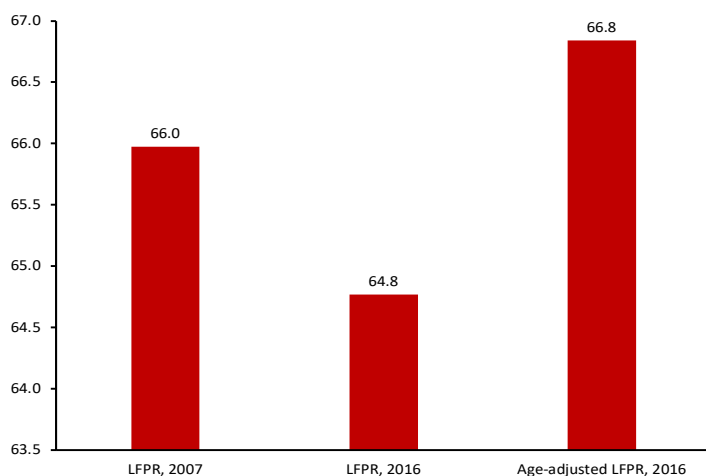
In 2017, the Kalamazoo-Portage area not only surpassed 60 new home starts per month for the first time since 2007, it topped 80 as well.

The above figure's blue bars show new housing starts in the Kalamazoo-Portage MSA as compiled by Dodge Data and Analytics, and the red line follows the home purchase price index from the Federal Housing Finance Agency (FHFA). Construction fell off slightly in 2007 compared to the average for the previous six years, while prices continued to rise during the year. As the recession began, the number of new dwelling units dropped off and remained low through 2012. Recovery was modest even during 2016, but 2017 was the first year that exceeded the pace of 2007. Prices began rising in 2013 and now have surmounted the 2007 peak.

In previous issues of *Business Outlook*, we looked into labor-force participation, meaning the percentage of individuals employed or unemployed in the whole population 16 and over, and the effects of the aging workforce. Here we examine the *relationship* of those two elements—in other words, the effect that the aging of the workforce has had on the labor-force participation rate. We do this by using an age-adjusted rate.

The age-adjusted labor-force participation rate shifts the age distribution in 2016 to that of 2007, while still using the labor-force rates for each age group in 2016. Labor-force participation shrank to 64.8 percent in 2016, from 66.0 in 2007. However, not all of the fault can be pinned on a struggling economy: had the age distribution remained the same, the labor-force rate would have been 66.8 in 2016, nearly a full point above 2007.

Labor-Force Rates—2007, 2016, and Age-Adjusted 2016

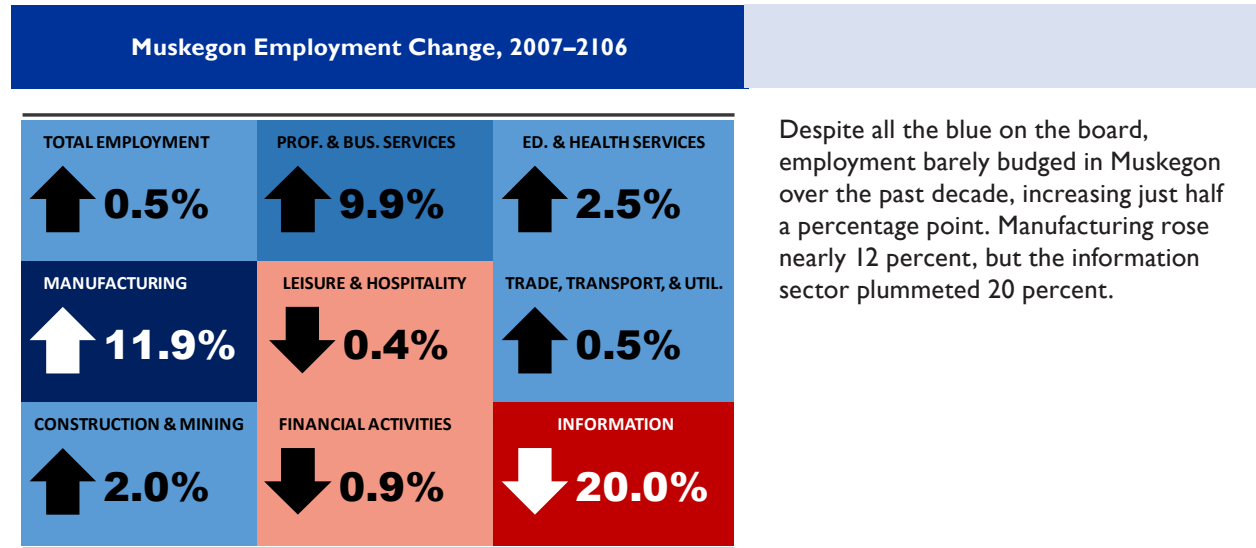


The Kalamazoo-Portage area shows a similar pattern to the other MSAs in west Michigan—had the general population not gotten older over the past decade, the labor-force participation rate would have fared much better than it did. In this case, it would have been two full points higher than in actuality.

SOURCE: U.S. Census American Community Survey (ACS).

MUSKEGON–NORTON SHORES MSA

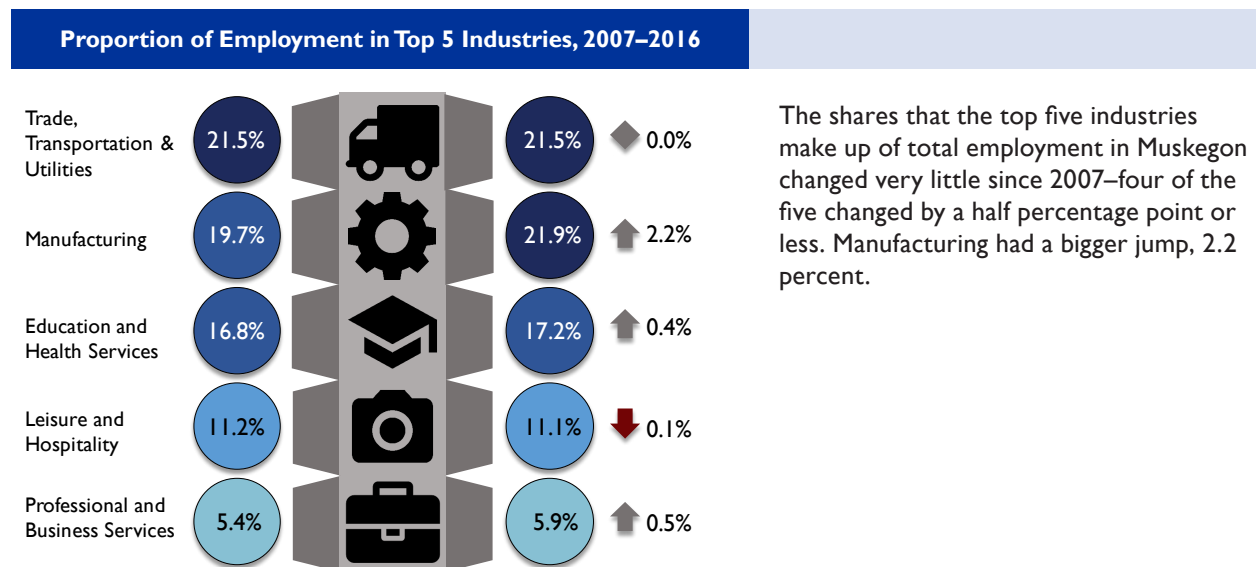
Overall employment in Muskegon increased just 0.5 percent from 2007 through 2016. Employment fell by nearly 7,000 jobs during the Great Recession and in the years afterward, and it only fully recovered recently. Manufacturing employment is up by nearly 12 percent, and the professional and business services sector is up by 9.9 percent. Because temporary workers are in the business services group, it is likely that manufacturing gains are even higher than 12 percent.



SOURCE: Bureau of Labor Statistics, Current Employment Statistics.

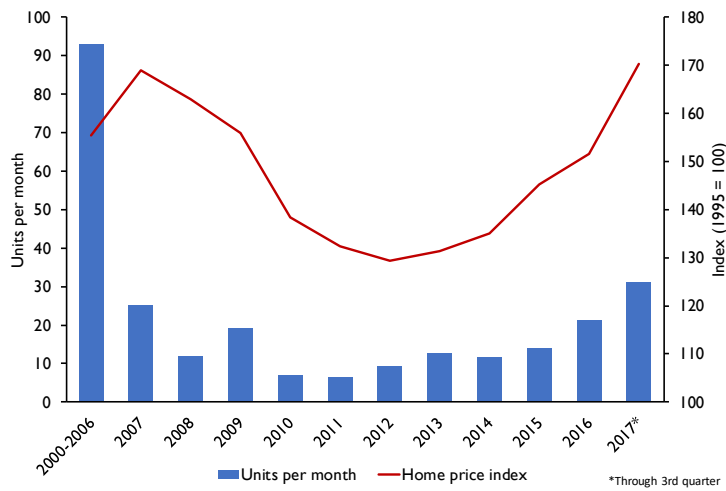
The top industry group—trade, transportation, and utilities—was the largest employer in the area in 2007, at 21.5 percent of employed persons, and that percentage is unchanged in 2016. Manufacturing employment has grown by 2.2 percentage points, to 21.9 percent of total employment.

The blue bars in the top figure on the next page show new housing starts in the Muskegon MSA as compiled by Dodge Data and Analytics, and the red line indicates the home purchase price index from the Federal Housing



SOURCE: Bureau of Labor Statistics, Current Employment Statistics.

Muskegon–Norton Shores Housing Units and Prices



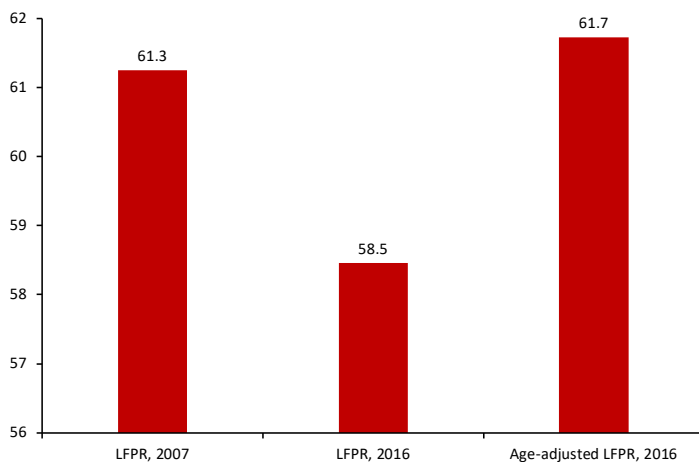
New housing starts in Muskegon have not risen as much over the past decade as in some other parts of west Michigan. However, proportionally, the rise is quite similar—about four times the number of housing starts at the low point of the recession.

Finance Agency (FHFA). The pace of construction plummeted in 2007, even before the recession officially started at the end of that year. That pace has increased slightly in the most recent years but remains relatively low. In contrast, prices made a robust turnaround after hitting bottom in 2012: through the third quarter of 2017, they stand where they were at their peak in 2007.

In previous issues of *Business Outlook*, we looked into labor-force participation, meaning the percentage of individuals employed or unemployed in the whole population 16 and over, and the effects of the aging workforce. Here we examine the *relationship* of those two elements—i.e., the effect that the aging of the workforce has had on the labor-force participation rate. We do this by using an age-adjusted rate.

The age-adjusted labor-force participation rate shifts the age distribution in 2016 to that of 2007, while still using the labor-force rates for each age group in 2016. The labor-force rate contracted to 58.5 percent in 2016, from 61.3 percent in 2007. The adjusted rate shows that while the Great Recession pushed some workers out of the labor force, an aging population did so as well. Had the population age distribution remained the same, the rate would have been 61.7 percent in 2016, more than three percentage points higher than it actually was.

Labor-Force Rates—2007, 2016, and Age-Adjusted 2016



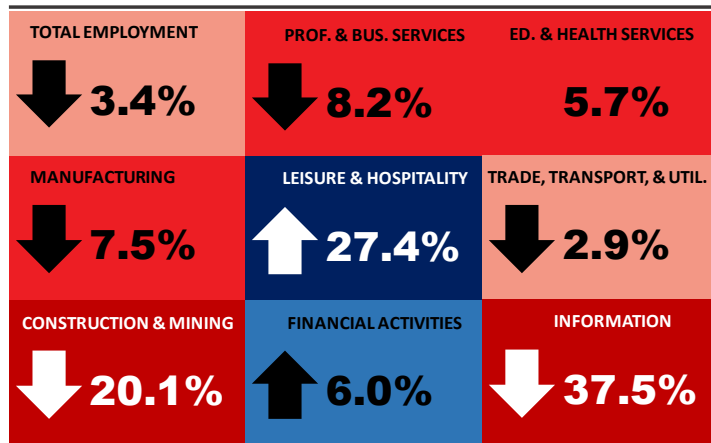
The Muskegon MSA shows a similar feature to many others—an age-adjusted labor-force participation rate that is higher than the actual rate from nine years earlier. This adjusted LFPR reflects what employment would be like in west Michigan if the population cohorts had not aged.

SOURCE: U.S. Census American Community Survey (ACS).

NILES–BENTON HARBOR MSA

Employment in the Niles–Benton Harbor MSA has not fully recovered from the Great Recession. The area shed more than 6,500 jobs during the Great Recession and into early 2010. As of 2016, employment remained 3.4 percent below 2007 levels. Only leisure and hospitality employment and financial employment have improved, gaining 27.4 percent and 6.0 percent, respectively.

Benton Harbor Employment Change, 2007–2016



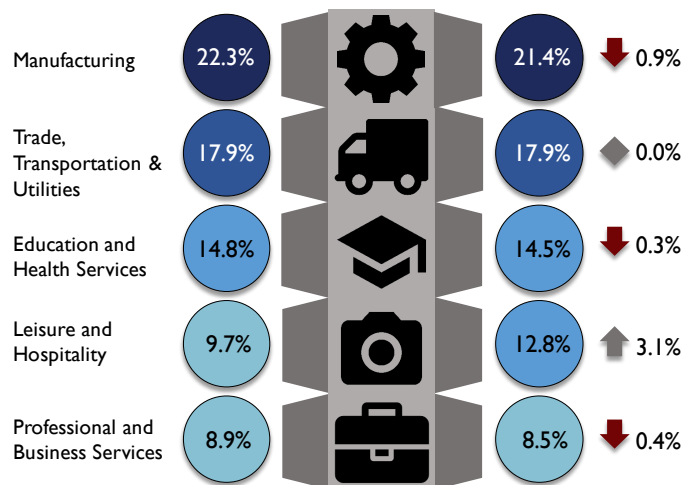
For Niles–Benton Harbor, the red squares have the blue ones surrounded, which is not a good sign. Total employment is down 3.4 percent despite robust gains in leisure and hospitality.

SOURCE: Bureau of Labor Statistics, Current Employment Statistics.

The distribution of employment in Niles–Benton Harbor is relatively similar between 2007 and 2016, as many industries fell in total employment. Manufacturing remains the largest industry, and trade, transportation, and utilities employment is unchanged as a share of the total. Leisure and hospitality is the only industry to make a large shift in share, going from 9.7 percent of the total in 2007 to 12.8 percent in 2016.

In the top figure on the following page, the blue bars show new housing starts in the Niles–Benton Harbor MSA as compiled by Dodge Data and Analytics, and the red line traces the home purchase price index from the

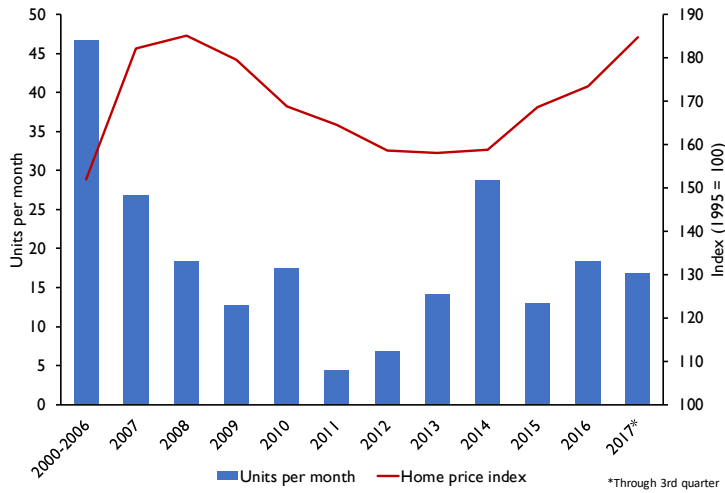
Proportion of Employment in Top 5 Industries, 2007–2016



The shares of employment among the top five industries in the Niles–Benton Harbor area were pretty stable except for leisure and hospitality, which had almost a 33 percent increase, fueling what little good news there was for the area over the past decade.

SOURCE: Bureau of Labor Statistics, Current Employment Statistics.

Niles–Benton Harbor Housing Units and Prices



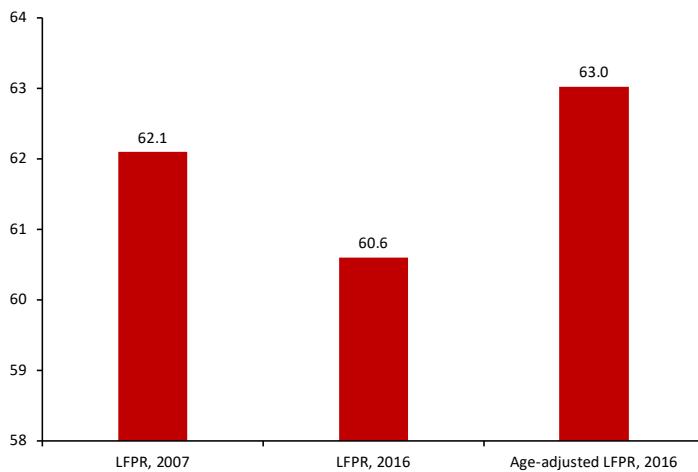
New home starts in Niles–Benton Harbor, after hitting bottom in 2011, rose dramatically starting in 2012, but since 2015 they have tailed off. Home prices are mildly up.

Federal Housing Finance Agency (FHFA). From 2000 to 2006, the pace of new home construction averaged 47 units per month. But even before the Great Recession started in December of 2007, the pace of construction had slowed during the year, and it continued to fall through 2008 and 2009. Although construction was slowing, prices were rising, and they did not decline until 2009. Prices began rebounding in 2014 and, in the third quarter of 2017, eclipsed their peak from 2008. Even so, construction remains sluggish.

In previous issues of *Business Outlook*, we looked into labor-force participation, meaning the percentage of individuals employed or unemployed in the whole population 16 and over, and the effects of the aging workforce. In this issue, we examine the *relationship* of these two elements—in other words, the effect that the aging of the workforce has had on the labor-force participation rate. We accomplish this by using an age-adjusted rate.

The age-adjusted labor-force participation rate shifts the age distribution in 2016 to that of 2007, while still using the labor-force rates for each age group in 2016. The adjusted rate shows that while the labor-force participation rate fell to 60.6 percent in 2016, had the population distribution remained the same the rate would have been 63.0 percent—almost a point above the 2007 rate. The adjusted rate suggests that not only the economy but also an aging population are driving down the labor-force participation rate.

Labor-Force Rates—2007, 2016, and Age-Adjusted 2016



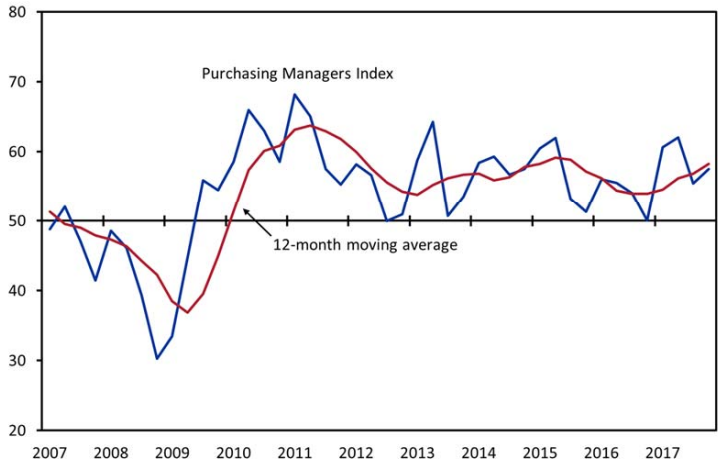
The pattern here is nearly identical to many of the other MSAs—the labor-force participation rate for 2016, when adjusted to have the same shares of population in the various age cohorts as existed in 2007, represents a substantial increase over the actual rate.

SOURCE: U.S. Census American Community Survey (ACS).

PURCHASING MANAGERS INDEX

Normally in this section we discuss the contributing monthly factors to the index. However, in this issue we are examining the long-term trend in the index since the onset of the Great Recession. Even before the Great Recession began in December 2007, the West Michigan Purchasing Managers Index (blue line) was already showing decline in the manufacturing sector—only one quarter from that year registered above 50, signifying expansion. The index returned to positive in mid-2009, just as the recession was ending. Since then, the index has remained above 50, although sometimes just barely.

West Michigan Area Purchasing Managers Index

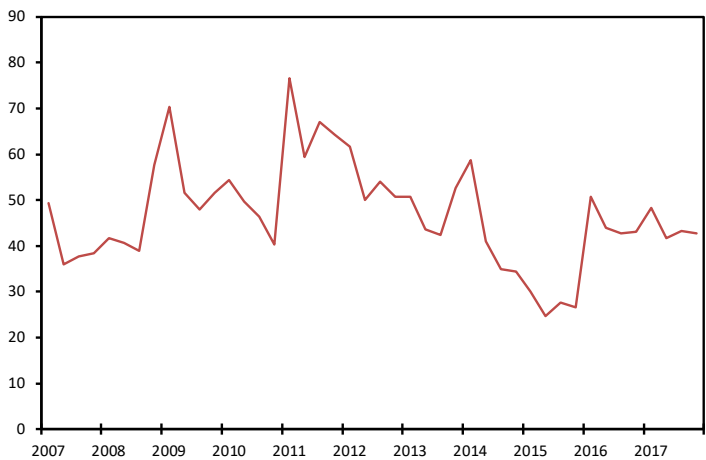


The 12-month moving average, shown in red, delineates a robust recovery in 2010 and 2011. The index is created by Brian Long of the Institute of Supply Management at Grand Valley State University; index values over 50 indicate the manufacturing sector in west Michigan is growing. The data are quarterly.

SOURCE: Google Insights.

As the Great Recession deepened, interest among west Michigan residents in topics related to “welfare and unemployment” peaked, as shown in the figure below. It also peaked in 2011 and 2016, but these latter peaks represent changes in data collection measures, resulting in some discontinuity. After the 2011 peak, the index declined steadily until the data collection changed again in 2016. Since then, the Google index has again started on a downward trend, indicating people are not too anxious about the economy.

Relative Percentage Change in Interest in the Google Search Topic “Welfare and Unemployment” in West Michigan



This figure tracks Google searches in the west Michigan region on topics related to “welfare and unemployment.” If we ignore the steep jumps in 2011 and 2016, which reflect changes in the method of collecting data, and look only at the consistently downward trend otherwise, the index suggests that the residents of west Michigan remain as unconcerned about unemployment as they have been for several years.

SOURCE: Institute for Supply Chain Management.

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