



October 2016 Summary

U.S. Economy: The annual rate of real U.S. GDP growth estimate for 2016Q3 was revised up from 2.9 percent to 3.2 percent -- substantially faster than in recent quarters. New durable goods orders rose 2.1 percent from last October. Housing starts were up sharply (23.3 percent) from last October to their highest annual rate in over nine years and existing home sales were up 5.9 percent. Retail sales increased 4.3 percent from last October. The Institute for Supply Management (ISM) reported the current expansion has now lasted 89 months. The ISM Production Management Index (PMI) rose 2.5 points from last October. At 51.9, the October 2016 PMI signaled an expanding manufacturing sector for the seventh month out of the last eight months. The ISM non-manufacturing index (NMI) signaled service sector expansion for the 81st straight month but the pace of growth was down 3.5 points last October. Consumer sentiment was down 2.8 points from October 2015 and was off 4.0 points from a month ago. In October 2016, industrial production declined 0.9 percent from the year-ago level -- the 14th straight monthly y-o-y decline. The capacity utilization rate fell 0.9 of a point from October 2015 -- the 20th consecutive y-o-y rate drop.

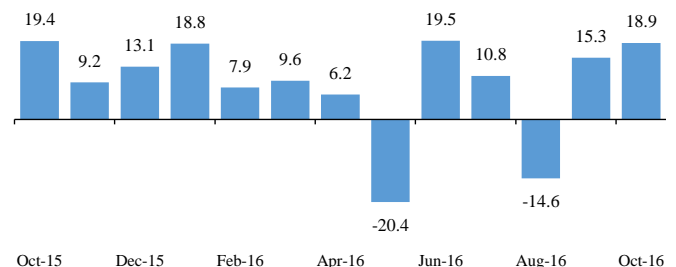
Employment: In October 2016, the Michigan unemployment rate rose 0.1 of a percentage point from September to 4.7 percent. The October 2016 Michigan rate was down 0.4 of a percentage point from October 2015. The U.S. rate was down 0.1 of a percentage point from September at 4.9 percent. Between October 2015 and October 2016, Michigan payroll employment gained a net 94,300 jobs (2.2 percent). Michigan payroll employment in October 2016 rose 18,900 jobs compared to September 2016. U.S. payroll employment was up 2.4 million jobs (1.7 percent) in October 2016 compared to a year ago. National payroll employment was up 161,000 jobs from September to October.

Auto Industry: In October 2016, U.S. light vehicle sales fell 0.8 percent from last October but totaled a very strong annualized 17.9 million units. Between October 2015 and October 2016, the three-month average of Michigan vehicle production rose 3.1 percent while the three-month U.S. average was up 5.5 percent. Between October 2015 and October 2016, Michigan's share of U.S. vehicle production fell 0.4 of a percentage point to 18.3 percent.

Inflation: In October 2016, the overall U.S. consumer price index (CPI) rose 1.6 percent from a year ago. The Detroit CPI was up 1.7 percent from last October. The U.S. producer price index was up 0.8 percent from last year. At \$49.78, the October 2016 price of oil per barrel was up \$3.56 (7.7 percent) from October 2015.

Michigan Metro Areas: Compared to a year ago, October 2016 unemployment rates rose in 16 of Michigan's 17 major labor markets. However, household employment rose in 12 of Michigan's 17 major labor market areas.

**Michigan Payroll Employment
Up Sharply in September and October**
(change from previous month, thousands of jobs) ^(a)



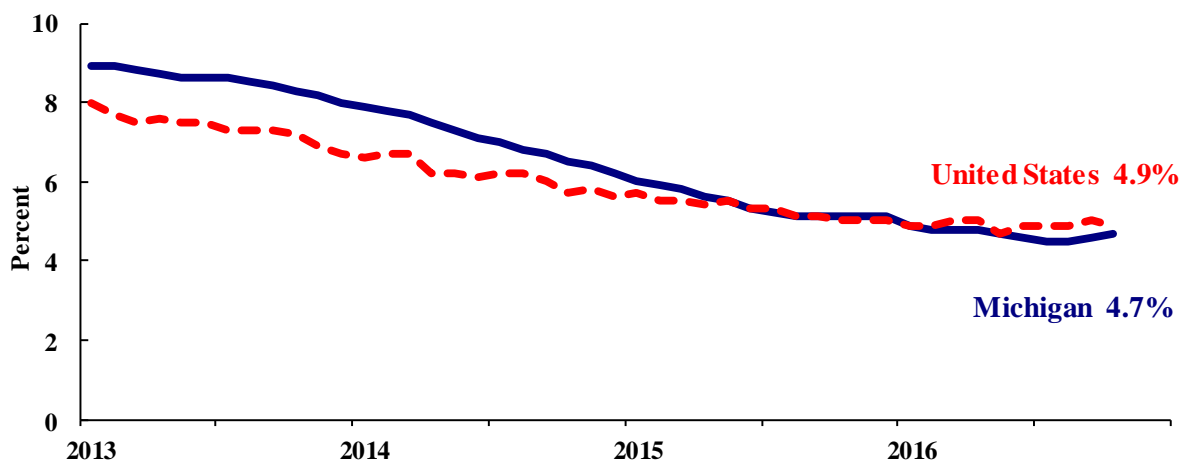
Jay Wortley
Director

Thomas Patchak-Schuster
Economist

Andrew Lockwood
Economist

- In October 2016, the Michigan unemployment rate increased 0.1 percent to 4.7 percent. The national unemployment rate decreased 0.1 percent from September to October to 4.9 percent.
- In October 2016, Michigan’s unemployment rate was down 0.4 of a percentage point from a year ago. The October U.S. unemployment rate decreased 0.1 of a percentage point from a year ago. Monthly unemployment rates fluctuate in part due to statistical sampling errors and data revisions.

**Michigan and U.S. Monthly Unemployment Rates
January 2013 to October 2016**



Source: Michigan Dept. of Technology, Management & Budget and Bureau of Labor Statistics, U.S. Dept. of Labor

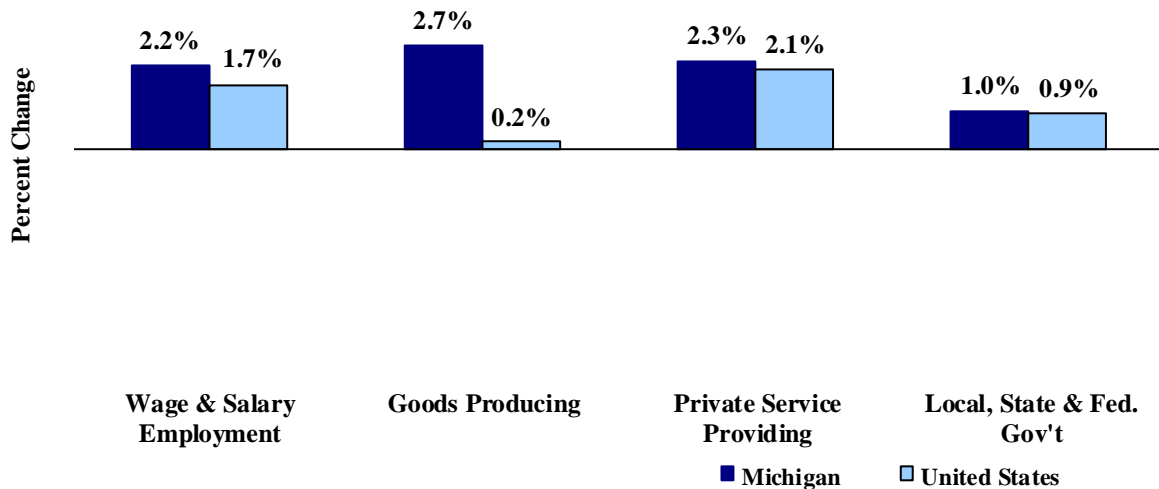
- In October, the total number of people employed in Michigan increased 14,000 to 4,615,000 persons while the labor force rose by 22,000. The statewide total number of unemployed workers rose by 8,000 to 228,000.
- United States employment totaled 151.9 million persons in October. The labor force totaled 159.7 million and there were 7.8 million unemployed in October 2016.

Employment by Place of Residence (in thousands)^(a)

	2015 <u>Average</u>	Aug <u>2016</u>	Sep <u>2016</u>	Oct <u>2016</u>	<u>Change From</u>			
					<u>Prior Month</u>		<u>Last Year</u>	
					<u>Level</u>	<u>%</u>	<u>Level</u>	<u>%</u>
Michigan								
Labor Force	4,751	4,805	4,821	4,843	22	0.5%	87	1.8%
Employed	4,493	4,588	4,601	4,615	14	0.3%	101	2.2%
Unemployed	258	216	220	228	8	3.6%	-14	-5.8%
Unemployment Rate	5.4%	4.5%	4.6%	4.7%	n.a.	0.1% pts	n.a.	-0.4% pts
United States								
Labor Force	157,130	159,463	159,907	159,712	-195	-0.1%	2,616	1.7%
Employed	148,834	151,614	151,968	151,925	-43	0.0%	2,728	1.8%
Unemployed	8,296	7,849	7,939	7,787	-152	-1.9%	-112	-1.4%
Unemployment Rate	5.3%	4.9%	5.0%	4.9%	n.a.	-0.1% pts	n.a.	-0.1% pts

- From October 2015 to October 2016, Michigan payroll employment increased 94,300 jobs (2.2 percent). State payroll employment rose by 18,900 jobs in October from September. Nationally, October 2016 payroll employment rose 2,357,000 (1.7 percent) from a year ago and was up 161,000 from September.

**Payroll Employment Growth
October 2015 to October 2016**



Source: Bureau of Labor Statistics, Michigan Department of Technology, Management & Budget

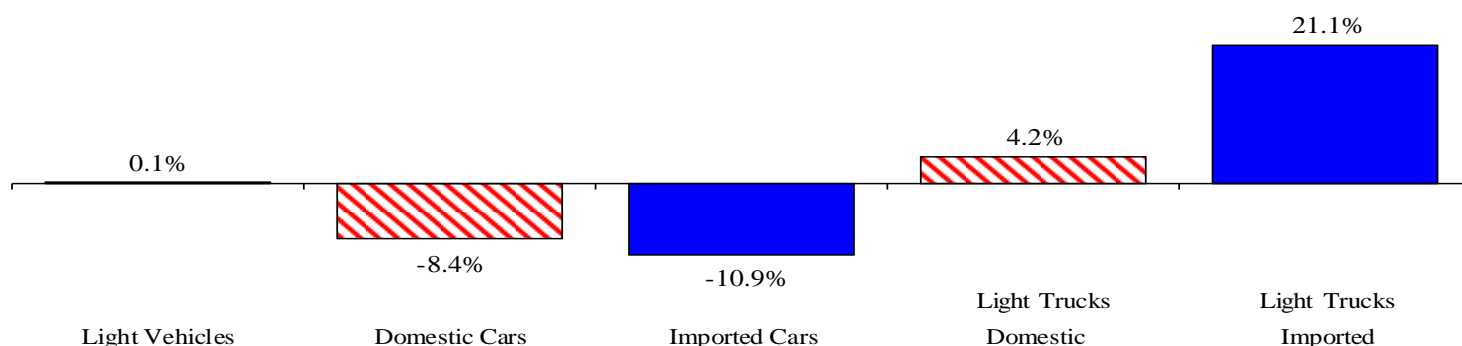
- In the goods-producing sector, Michigan payroll employment increased 2.7 percent in October from a year ago while employment in the private service-providing sector increased 2.3 percent. From a year ago, October national payroll employment rose 0.2 percent in the goods-producing sector and increased 2.1 percent in the private service-providing sector. Government employment was up 1.0 percent from a year ago in Michigan. Nationwide, government employment was up 0.9 percent.
- Manufacturing weekly hours in Michigan were down 1.3 hours in October compared to last year.

Wage and Salary (Payroll) Employment (in thousands)^(b)

	Michigan				United States			
	2015 Average	Oct 2015	Oct 2016	Percent Change	2015 Average	Oct 2015	Oct 2016	Percent Change
Wage & Salary Employment	4,243.7	4,266.3	4,360.6	2.2%	141,865	142,595	144,952	1.7%
Goods Producing	742.9	743.9	764.2	2.7%	19,584	19,581	19,615	0.2%
Manufacturing	587.3	589.6	600.7	1.9%	12,318	12,311	12,258	-0.4%
Private Service Providing	2,906.5	2,925.0	2,993.0	2.3%	100,275	100,987	103,102	2.1%
Trade, Trans. & Utilities	770.7	770.7	772.2	0.2%	26,920	27,011	27,423	1.5%
Services	1,872.0	1,888.0	1,946.2	3.1%	62,480	63,041	64,562	2.4%
Local, State & Fed. Gov't	594.3	597.4	603.4	1.0%	22,007	22,027	22,235	0.9%
Manufacturing Weekly Hours	44.2	44.3	43.0	-1.3 hrs	41.8	40.7	40.8	0.1 hrs

- October 2016 U.S. light vehicle sales were up 1.4 percent from September but were down 0.8 percent from October 2015. At 17.9 million units, October 2016 marks the 32nd straight month that the light vehicle annualized sales rate exceeded 16.0 million units and the 16th month out of the most recent 20 months that the sales rate exceeded 17.0 million units.
- U.S. sales of domestic light vehicles decreased 0.4 percent between October 2015 and October 2016. Foreign sales were down 2.1 percent over the same period. As a result, the foreign share of U.S. light vehicle sales fell 0.3 of a percentage point to 21.5 percent in October 2016.
- Auto sales decreased 11.5 percent compared to last October, while light truck sales were up 7.1 percent from October 2015. As a result, October 2016 marked the seventh straight month in which the light truck share of total sales exceeded 60.0 percent. Prior to the last seven months, the light truck sales share exceeded 60.0 percent only once (July 2005). Year-over-year, heavy truck sales declined 19.6 percent in October 2016.

**Year-to-Date Total Light Vehicle Sales (Jan-Oct 2016)
Up Only Slightly from Year Ago (Jan-Oct 2015)
(percent change)**



Motor Vehicle Sales Statistics

(Millions, unless otherwise specified)

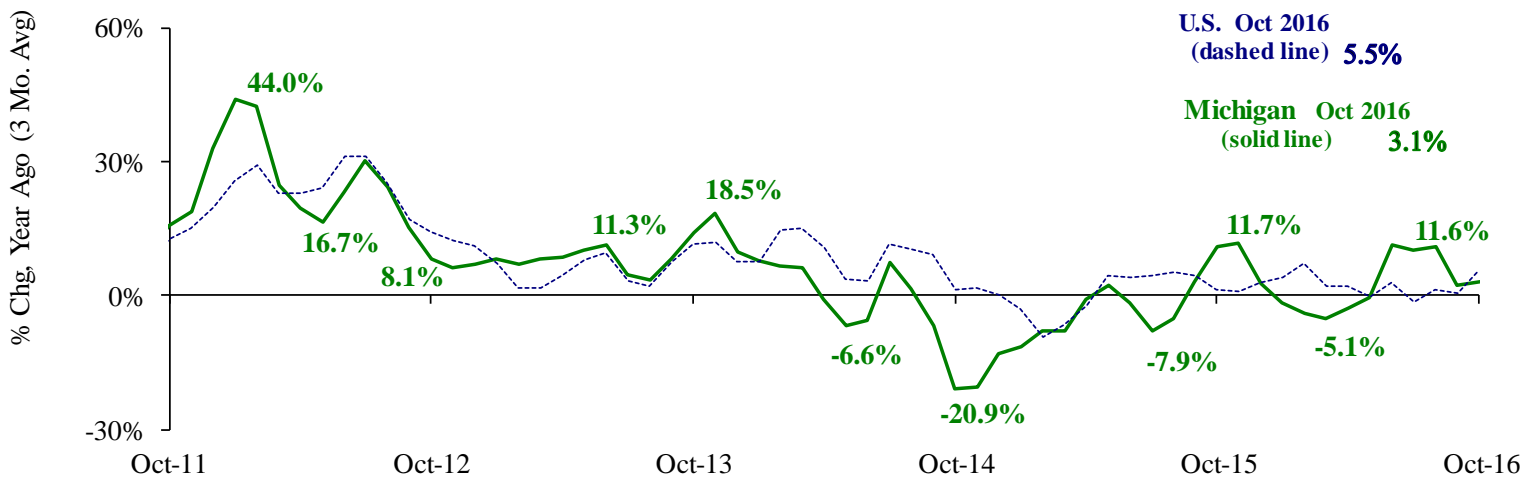
Motor Vehicle Sales ^(c)	2015	Aug	Sep	Oct	3 Month	Change from	
	Total	2016	2016	2016	Average	Level	%
Autos	7.5	6.5	7.0	6.8	6.8	(0.9)	-11.5%
Domestics	5.6	4.9	5.3	5.1	5.1	(0.7)	-11.8%
Imports	1.9	1.7	1.7	1.7	1.7	(0.2)	-10.3%
Import Share	25.6%	25.2%	24.4%	25.2%	24.9%	0.3% pts	
Light Trucks	9.9	10.4	10.7	11.1	10.7	0.7	7.1%
Domestics	8.1	8.2	8.6	9.0	8.6	0.6	7.4%
Imports	1.8	2.2	2.1	2.1	2.1	0.1	5.6%
Import Share	18.0%	20.8%	19.5%	19.3%	19.8%	-0.3% pts	
Total Light Vehicles	17.4	16.9	17.7	17.9	17.5	(0.1)	-0.8%
Heavy Trucks	0.4	0.4	0.4	0.4	0.4	(0.1)	-15.1%
Total Vehicles	17.8	17.3	18.0	18.3	17.9	(0.2)	-1.1%

Retail Inventories, Motor Vehicle and Parts Dealers^(d)
(billions of dollars)

	2015	Jul-16	Aug-16	Sep-16	3 Month	Change from	
	Average	Jul-16	Aug-16	Sep-16	Average	Level	%
Inventories	\$190.4	\$209.9	\$212.6	\$214.1	\$212.2	\$17.6	9.0%
Inventory/Sales Ratio	2.10	2.23	2.26	2.24	2.24	0.11	

- At 197,808 units, October 2016 Michigan motor vehicle production was down 1.4 percent from October 2015. National production increased 0.7 percent from last October. The three-month average of vehicle production (August 2016-October 2016) was up 3.1 percent in Michigan and up 5.5 percent nationally, compared to a year ago.
- In October 2016, Michigan car production was up 8.6 percent from a year ago while State truck production declined 5.7 percent. Nationally, car production decreased 2.3 percent while U.S. truck production was up 2.2 percent.
- Michigan’s share of national vehicle production fell 0.4 of a percentage point from the year-ago level to 18.3 percent in October 2016. Michigan’s share of U.S. car production was up 1.8 percentage points at 18.5 percent. Michigan’s share of U.S truck production decreased 1.5 percentage points to 18.2 percent.

**Michigan Motor Vehicle Production
Trend Growth Accelerates (e,f)**



Motor Vehicle Production Statistics

(Thousands, unless otherwise specified)

	2015					Change from Year Ago for the Month	
	Monthly Average	Aug 2016	Sep 2016	Oct 2016	3 Month Average	Level	%
U.S. Production (e)							
Autos	355.8	386.3	360.8	355.3	367.5	(8.2)	-2.3%
Trucks	644.1	770.8	730.7	725.0	742.2	15.7	2.2%
Total	1,000.0	1,157.1	1,091.5	1,080.3	1,109.6	7.5	0.7%
Michigan Production (f)							
Autos	68.3	71.2	69.5	65.8	68.9	5.2	8.6%
Trucks	125.6	142.0	139.4	132.0	137.8	(8.0)	-5.7%
Total	193.9	213.2	209.0	197.8	206.7	(2.8)	-1.4%
Michigan as % of U.S.	19.4%	18.4%	19.1%	18.3%	18.6%	-0.4%	pts

In October 2016, the unemployment rates in Michigan’s 17 labor market areas ranged from a low of 3.2 percent in the Grand Rapids-Wyoming Metropolitan Statistical Area (MSA) to a high of 5.6 percent in the Northeast Lower Michigan region. The October 2016 median unemployment rate was 4.4 percent, which is up 0.4 of a percentage point from last October’s 4.0 percent median rate.

Compared to a year ago, the October 2016 unemployment rate rose in 16 of Michigan’s 17 labor market areas. The median rate increase was 0.4 of a percentage point. The Detroit-Warren-Dearborn MSA reported the one unemployment rate decline of 0.7 of a percentage point. The Monroe MSA reported the largest rate increase of 0.9 of a percentage point, followed by four areas (Ann Arbor MSA, Niles-Benton Harbor MSA, Upper Peninsula and Northeast Lower Michigan) that each reported a 0.5 of a percentage point increase.

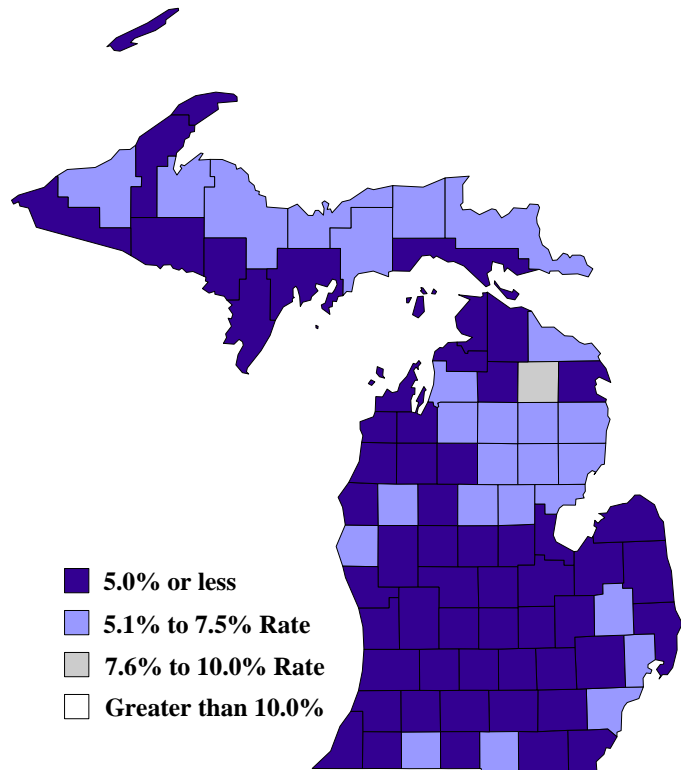
Between October 2015 and October 2016, household employment rose in 12 of Michigan’s 17 labor market areas, declined in three areas and was unchanged in two areas. The median employment increase was 1.0 percent. The Detroit-Warren-Dearborn MSA reported the largest year-over-year employment increase at 4.2 percent, followed by the Ann Arbor MSA with a 3.5 percent increase. The Upper Peninsula region reported the largest year-over-year employment decrease of 0.7 percent. The labor force rose in 15 labor market areas and fell in two areas. The Ann Arbor MSA reported the largest percent increase in labor force at 4.0 percent, followed by the Detroit-Warren-Dearborn MSA at 3.4 percent. The Upper Peninsula recorded the largest percent decline in labor force at 0.3 percent.

Between October 2015 and October 2016, the unemployment rate rose in 70 of Michigan’s 83 counties, fell in 12 counties and was unchanged in one county. The median October 2016 rate increase was 0.4 of a percentage point. Montmorency County reported the largest unemployment rate increase at 1.7 percentage points, followed by Hillsdale County and Marquette County, each with a 1.1 percentage points increase. In October 2016, the unemployment rate was below 5.0 percent in 53 of Michigan’s 83 counties compared with 59 counties with rates below 5.0 percent in October 2015.

Local Area Unemployment Rates^(g)

<u>Local Area</u>	<u>Oct 2015 Rate</u>	<u>Sep 2016 Rate</u>	<u>Oct 2016 Rate</u>
Michigan	4.7%	4.4%	4.6%
Ann Arbor	3.0%	3.1%	3.5%
Battle Creek	3.9%	3.9%	4.2%
Bay City	4.0%	4.1%	4.4%
Detroit-Warren-Dearborn	6.1%	5.4%	5.4%
Flint	4.5%	4.5%	4.9%
Grand Rapids-Wyoming	2.8%	2.9%	3.2%
Jackson	4.0%	4.0%	4.4%
Kalamazoo-Portage	3.5%	3.5%	3.8%
Lansing-East Lansing	3.2%	3.3%	3.6%
Midland	3.6%	3.6%	4.0%
Monroe	3.6%	3.7%	4.5%
Muskegon	4.4%	4.2%	4.7%
Niles-Benton Harbor	3.8%	4.0%	4.3%
Saginaw	4.1%	4.0%	4.5%
Upper Peninsula	4.5%	4.7%	5.0%
Northeast Lower Mich	5.1%	4.9%	5.6%
Northwest Lower Mich.	4.0%	3.8%	4.3%

County Unemployment Rates October 2016^(g)

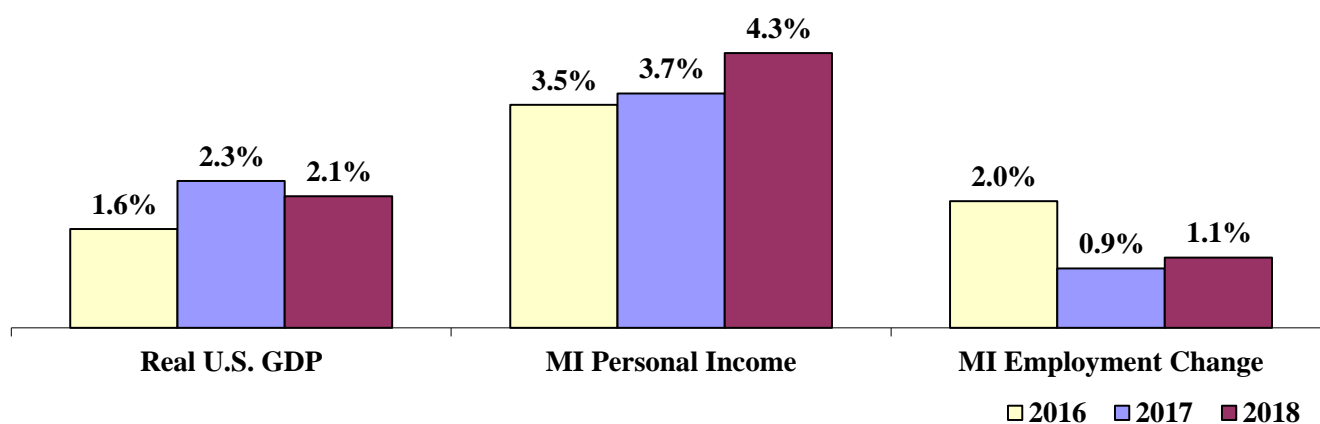


University of Michigan Economic Forecast Continued U.S. and Michigan Expansions

On November 17 and 18, 2016, the University of Michigan's Research Seminar in Quantitative Economics (RSQE), released its forecast for the U.S. and Michigan economies for 2017 and 2018. Forecast highlights include:

- After growing an estimated 1.6 percent in 2016, real (inflation adjusted) GDP is forecast to rise 2.3 percent in 2017 and grow 2.1 percent in 2018. Real consumption growth is expected to decelerate from 2.6 percent in 2016 to 2.2 percent in 2018. Real investment growth is forecast to rise 3.6 percent in 2017 and to increase 4.0 percent in 2018. Real government purchases are projected to rise 0.9 percent in 2017 and to increase 1.1 percent in 2018. Net exports are expected to rise in 2017 but to decline in 2018.
- U.S. wage and salary employment is expected to increase over the forecast horizon with 1.8 percent growth in 2016, 1.5 percent growth in 2017 and 1.3 percent growth in 2018. As a result, the U.S. unemployment rate is projected to fall over the next two years from 4.9 percent in 2015 to 4.6 percent in 2018.
- After rising to a record 17.40 million units in 2015, light vehicle sales are expected to fall slightly to 17.37 million units in 2016, 17.31 million units in 2017 and 17.16 million units in 2018.
- Michigan wage and salary employment rose an estimated 2.0 percent in 2016. Michigan employment is forecast to increase 0.9 percent in 2017 and to rise 1.1 percent in 2018.
- The Michigan unemployment rate fell an estimated 0.77 of a percentage point to 4.63 percent in 2016, but is forecast to change little over the forecast horizon, dropping to 4.60 percent in 2017 and 4.56 percent in 2018.
- Michigan personal income increased an estimated 3.5 percent in 2016 and is expected to rise 3.7 percent in 2017 and to increase 4.3 percent in 2018.

U.S. GDP and Michigan Personal Income Grow Michigan Employment Increases



	<u>Jul-16</u>	<u>Aug-16</u>	<u>Sep-16</u>	<u>Oct-16</u>	<u>Change from Year Ago</u>
KEY ECONOMIC INDICATORS					
Consumer Sentiment ^(h)	90.0	89.8	91.2	87.2	-2.8 points
ISM Manufacturing Index ⁽ⁱ⁾	52.6	49.4	51.5	51.9	2.5 points
ISM Non Manufacturing Index ⁽ⁱ⁾	55.5	51.4	57.1	54.8	-3.5 points
	<u>2015.4</u>	<u>2016.1</u>	<u>2016.2</u>	<u>2016.3</u>	
Business Executives' Confidence ⁽ⁱ⁾	45.0	47.0	52.0	50.0	2.0 points
INFLATION ^(k)					
1982-84 = 100 (CPI)	<u>Jul-16</u>	<u>Aug-16</u>	<u>Sep-16</u>	<u>Oct-16</u>	<u>Change from Year Ago</u>
Nov 2009 = 100 (PPI)					
U.S. Consumer Price Index	240.6	240.8	241.4	241.7	1.6%
Detroit CPI	NA	223.9	NA	224.3	1.7%
U.S. Producer Price Index	110.6	110.5	110.7	110.7	0.8%
INTEREST RATES					
90 Day T-Bill ^(l)	0.30%	0.30%	0.29%	0.33%	0.31% points
10 Year Treasury Securities ^(l)	1.50%	1.56%	1.63%	1.76%	-0.31% points
INDUSTRIAL PRODUCTION ^(l)					
	104.6	104.5	104.2	104.3	-0.9%
CAPACITY UTILIZATION ^(l)					
	75.4%	75.6%	75.4%	75.3%	-0.9% points
RETAIL SALES ^(d)					
	\$457.8	\$457.7	\$462.1	\$465.9	4.3%
HOUSING STARTS and SALES					
(Millions Annual Rate)	<u>Jul-16</u>	<u>Aug-16</u>	<u>Sep-16</u>	<u>Oct-16</u>	<u>% Change From Year Ago</u>
Housing Starts ^(d)	1.218	1.164	1.054	1.323	23.3%
Existing Home Sales ^(m)	5.380	5.300	5.490	5.600	5.9%
DURABLE GOODS ORDERS ^(p)					
	\$226.9	\$227.5	\$228.4	\$239.4	2.1%
PERSONAL INCOME ^(c)					
(Billions of Dollars)	<u>2015.3</u>	<u>2015.4</u>	<u>2016.1</u>	<u>2016.2</u>	<u>% Change From Year Ago</u>
Michigan	\$426.8	\$433.1	\$433.6	\$438.5	3.8%
U.S.	\$15,564.5	\$15,694.3	\$15,740.8	\$15,900.9	3.2%
GROSS DOMESTIC PRODUCT					
(Billions of Chained 2009 Dollars) ^(c)	<u>2015.4</u>	<u>2016.1</u>	<u>2016.2</u>	<u>2016.3</u>	<u>Annualized % Chg From Last Qtr</u>
	\$16,490.7	\$16,525.0	\$16,583.1	\$16,712.5	3.2%

- (a) Seasonally adjusted. Sources: Bureau of Labor Statistics, U.S. Department of Labor and Michigan Department of Technology, Management and Budget.
- (b) Bureau of Labor Statistics, U.S. Department of Labor (BLS 790).
- (c) Seasonally adjusted annual rates. Source: Bureau of Economic Analysis, U.S. Department of Commerce.
- (d) Bureau of the Census, U.S. Department of Commerce
- (e) Automotive News.
- (f) Michigan Department of Treasury.
- (g) Michigan Department of Technology, Management and Budget.
- (h) University of Michigan Survey of Consumers.
- (i) Institute for Supply Management (ISM), formerly NAPM.
- (j) The Conference Board.
- (k) Bureau of Labor Statistics, U.S. Department of Labor.
- (l) Seasonally adjusted rates (except interest rates). Federal Reserve System Board of Governors. 2007 equals 100. Treasury bill rate (secondary market).
- (m) National Association of Realtors.