35th Oakland County Economic Outlook

2020-2022 SUMMARY

OAKLAND COUNTY MICHIGAN
ECONOMIC DEVELOPMENT & COMMUNITY AFFAIRS
DAVID COULTER
OAKLAND COUNTY EXECUTIVE

OAKLAND COMMUNITY COLLEGE®
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Presented by:
Dr. Gabriel Ehrlich and Donald R. Grimes,
Research Seminar in Quantitative Economics,
University of Michigan

Online Summary available at:
AdvantageOakland.com

SUMMARY INTRODUCTION

DAVID COULTER

OAKLAND COUNTY EXECUTIVE

AAA

BOND RATING SINCE 1998

Oakland County is a fiscally responsible government partner with resources to support your success.

Thank you for your interest in Oakland County's economic outlook forecast. We are proud of the work we do on behalf of our 42,000 businesses and 1.2 million residents. The county continues to be a great place for entrepreneurs with an idea, small businesses looking to grow or global firms looking to relocate. We welcome anyone looking to build an exciting life or career in one of America's great counties.

Oakland Community College and our Department of Economic Development & Community Affairs have partnered for more than three decades on the economic forecast, which results in the production of this much anticipated report. The data is prepared and presented by respected economists Dr. Gabriel Ehrlich, director of the Research Seminar in Quantitative Economics at the University of Michigan, and longtime contributor Donald R. Grimes. It provides business, education and government leaders in southeast Michigan with a three-year projection of economic growth for the area.

I thank them and the Oakland County Board of Commissioners for its continued support of our economic development programming. We are grateful for the past sponsors and our long-standing relationship with Chase.

We all know the beating the global economy has taken because of the coronavirus. With assistance from the federal government and in cooperation from the Board of Commissioners, we have moved aggressively to stabilize our economy and mitigate the effects of the pandemic locally. We quickly allocated more than $130 million of our $219 million federal CARES Act funding into the for grants to businesses, communities and residents including:

- Nearly $14 million to 3,500 small businesses seriously impacted by the pandemic. Grants averaged nearly $4,000 from the small business stabilization fund.
- The "Saving Businesses, Saving Lives" grant, which incentivized Oakland County manufacturers (23 companies to date sharing $887,000) to produce personal protective equipment for health care workers, hospitals and first responders.
- $32 million for retail stores, restaurants and personal service businesses such as salons and fitness centers.
- 15,000 Oakland Together COVID-19 safety kits which include facemasks, no-touch thermometers, gloves and sanitizer were created to give small businesses, faith-based and nonprofit organizations essential materials for reopening.
- Oakland County ($10 million) and Macomb County ($2 million) partnered with Automation Alley to bring advanced manufacturing technologies to small and medium businesses to improve the region's agility and ability to respond to future disruptions such as the COVID 19 pandemic.
- $30 million for cities, townships, and villages impacted by COVID-19.
- $28 million to help county public and charter schools recover some of the unexpected costs incurred preparing for in school or remote student learning.
- $2 million to hire 60 school nurses to help districts develop strategies to prepare for the safe return of students, faculty and staff to the classroom or for virtual learning.
- $10 million fund to support 84 non-profit organizations, with grants ranging from $4,000 to $500,000.
- $8.1 million for the Rent, Mortgage & Utility Relief Program to assist eligible county residents who have fallen behind on their rent, mortgage or utility payments because of a lost job or other income reduction with a one-time grant of up to $15,000 per household.
- $2 million to assist museums and cultural institutions.

These grants provided critical assistance to businesses and residents. We know the coronavirus remains with us, and we will continue to do everything we can to support our businesses, residents and communities. As Oakland Together, we will get through this challenge.

35th Oakland County Economic Outlook

SUMMARY 2020-2022

PRESENTED BY

Dr. Gabriel M. Ehrlich and Donald R. Grimes

University of Michigan

SEPTEMBER 2020

Gabriel Ehrlich

Donald Grimes

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This Economic Outlook Summary is available online beginning September 19, 2020 at:

AdvantageOakland.com | lsa.umich.edu/econ/rsqe

Research Seminar in Quantitative Economics (RSQE)

The Research Seminar in Quantitative Economics (RSQE) is a modeling and forecasting unit that has been in operation at the University of Michigan since 1952. Four times per year, RSQE provides forecasts of both the U.S. economy and the Michigan economy. RSQE hosts the University of Michigan's Annual Economic Outlook Conference, the longest running such event in the U.S., in Ann Arbor each November. RSQE has twice received the prestigious Blue Chip Annual Economic Forecasting Award (AEFA) recognizing "accuracy, timeliness, and professionalism" in economic forecasting.

Dr. Gabriel M. Ehrlich

received his Ph.D. in economics from the University of Michigan. He is the director of the University's Research Seminar in Quantitative Economics (RSQE). His research focuses on macroeconomics and urban and regional economics. His work has been published in the *New England Journal of Medicine*, the Review of Economics and Statistics, the *Journal of Urban Economics*, and the *Journal of Health Politics, Policy and Law*.

Prior to joining RSQE, Dr. Ehrlich worked in the Financial Analysis Division at the Congressional Budget Office (CBO), where he forecast interest rates and conducted analysis on monetary policy and the mortgage finance system. He has also worked as a financial analyst in the mortgage banking industry. He earned his undergraduate degrees in finance and economics at the University of Maryland, where he was chosen by the faculty as the outstanding graduate in finance during his senior year.

Dr. Ehrlich testifies twice per year to the state legislature on Michigan's fiscal and economic prospects, which the state uses as a guide to determining expected future revenues. He recently coauthored The United States Economic Outlook for 2020–2021 and The Michigan Economic Outlook for 2020–2021.

Donald R. Grimes

received his master's degree in economics from the University of Michigan. He is a senior research area specialist at the University's Research Seminar in Quantitative Economics (RSQE) and at the Economic Growth Institute, where he is assistant director of the Center for Labor Market Research. His primary research interests are in labor economics and economic forecasting.

For 40 years, he has been engaged in economic forecasting for state and local governments and is frequently called upon for policy advice. He has worked for many years with the Michigan departments of Transportation and Treasury and the Michigan Economic Development Corporation on policy analysis and evaluating economic strategies. He is co-director of a project to generate long-term economic and demographic projections for all of the counties of Michigan. His past research includes a study looking at Michigan's industrial structure with a view to identifying sectors that will promote economic growth in the future.

His work has been published recently in the *Economic Development Quarterly*, the *New England Journal of Medicine*, and the *Journal of Health Politics, Policy and Law*. He recently coauthored The Michigan Economic Outlook for 2020–2021.

Dr. Michael R. McWilliams

is the Michigan Forecasting Specialist at the Research Seminar in Quantitative Economics (RSQE) at the University of Michigan. He earned his Ph.D. in economics from the University of Michigan, and he has also received an M.Sc. in economics from the London School of Economics and Political Science. At RSQE, Michael assists with forecasts of the Michigan economy and leads the development of state tax revenue projections. He recently coauthored The Michigan Economic Outlook for 2020–2021.

Michael's personal research focuses on a range of topics in environmental and natural resource economics, including land use change and its causes and environmental consequences, regulation of light-duty vehicles, and the impact of the ethanol mandates. His work has been published in the Proceedings of the National Academy of Sciences and Energy Policy. During his graduate study, Michael interned at the U.S. Environmental Protection Agency, Office of Transportation and Air Quality.

Jacob T. Burton

is the newest member of the team at the University of Michigan's Research Seminar in Quantitative Economics (RSQE), where he contributes to the Michigan and U.S. forecasts four times per year. He recently finished his master's degree in applied economics from Eastern Michigan University. He coauthored The United States Economic Outlook for 2020–2021 and The Michigan Economic Outlook for 2020–2021. His primary fields of interests are in economic forecasting and energy economics.

lsa.umich.edu/econ/rsqe

Table 1

Track Record over the Years

Year of Forecast	% Forecast Error for Total Private Jobs	Year of Forecast	% Forecast Error for Total Private Jobs	Year of Forecast	% Forecast Error for Total Private Jobs
1986	+ 1.4	1998	+ 1.3	2010	– 1.7
1987	+ 0.7	1999	– 1.2	2011	– 2.5
1988	– 1.8	2000	+ 0.6	2012	– 2.6
1989	– 1.9	2001	+ 1.9	2013	– 1.1
1990	+ 2.2	2002	+ 3.2	2014	– 0.3
1991	+ 3.9	2003	+ 1.5	2015	– 0.1
1992	– 2.0	2004	+ 2.6	2016	– 0.1
1993	+ 0.5	2005	+ 1.4	2017	+ 1.1
1994	– 1.3	2006	+ 3.4	2018	+ 0.5
1995	+ 0.2	2007	0.0	2019	+ 0.1
1996	– 0.5	2008	+ 2.3		
1997	+ 0.6	2009	+ 5.5		

(Positive numbers indicate that the forecast was too high; negative numbers indicate that it was too low.)

Average absolute forecast error 1986–2019: 1.5%

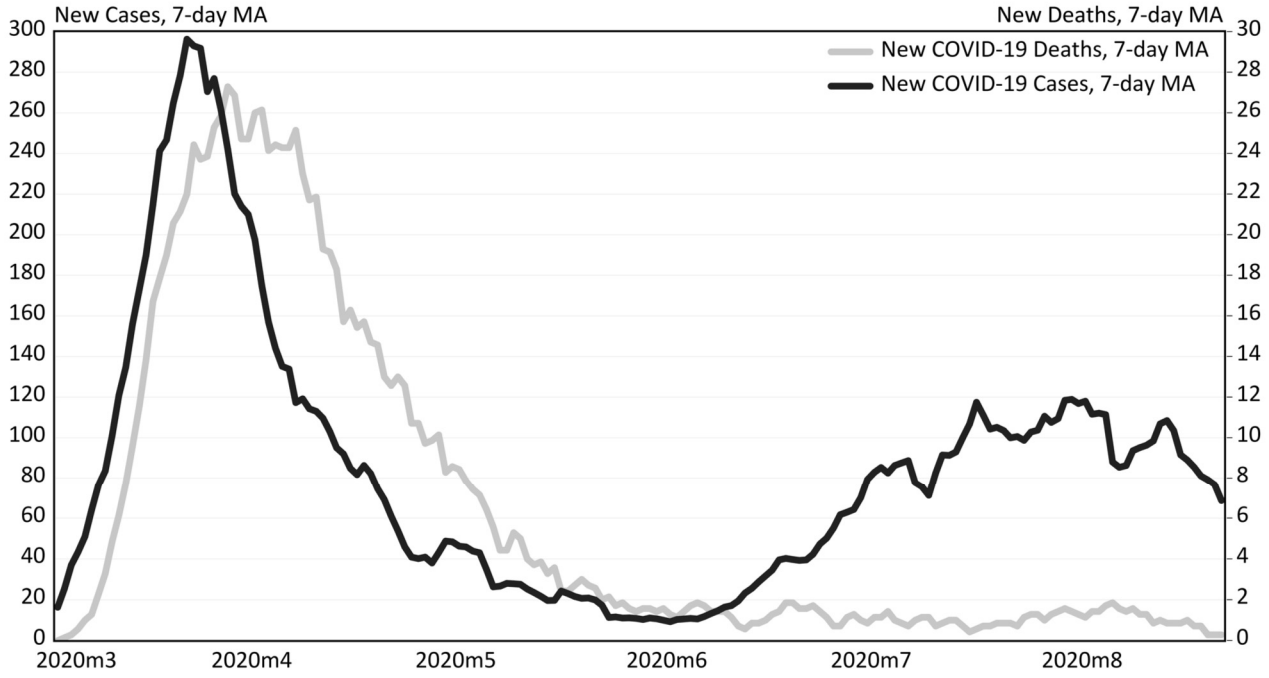
	Forecast 2019	Actual 2019
Unemployment rate	2.7%	3.4%
Consumer inflation rate	1.5%	1.4%

Forecast Date: September 2020

- In last year's report, we forecast that Oakland County's private sector would add 9,888 jobs in 2019, for a growth rate of 1.4 percent. We now estimate that the county gained 9,160 new jobs last year, or 1.3 percent, resulting in an over prediction of 0.1 percentage points, or one worker per 1,000.
- That forecast error is well below our average absolute error of 1.5 percent since 1986.
- Our relatively small overall forecast error benefited from offsetting errors at the sector level. Job growth was stronger in the goods-producing sector than we anticipated, especially in non-automotive manufacturing, but it was weaker in the service-providing sector, as the job losses in administrative support and waste management were larger than we expected.
- Our forecast for the government sector was also too optimistic. We anticipated job growth of 1.0 percent in 2019; instead, government employment declined by 38 jobs (-0.1 percent).
- We had forecast that the unemployment rate would decline by 0.6 percentage points, from 3.3 percent in 2018 to 2.7 percent in 2019. Instead, Oakland County's unemployment rate actually increased by 0.1 percentage points, to 3.4 percent.
- Our forecast for inflation was very close. We overestimated local consumer inflation by 0.1 percentage points. Local prices increased by 1.4 percent in 2019 instead of the 1.5 percent we had forecast.

Figure 1

The COVID-19 Pandemic in Oakland County

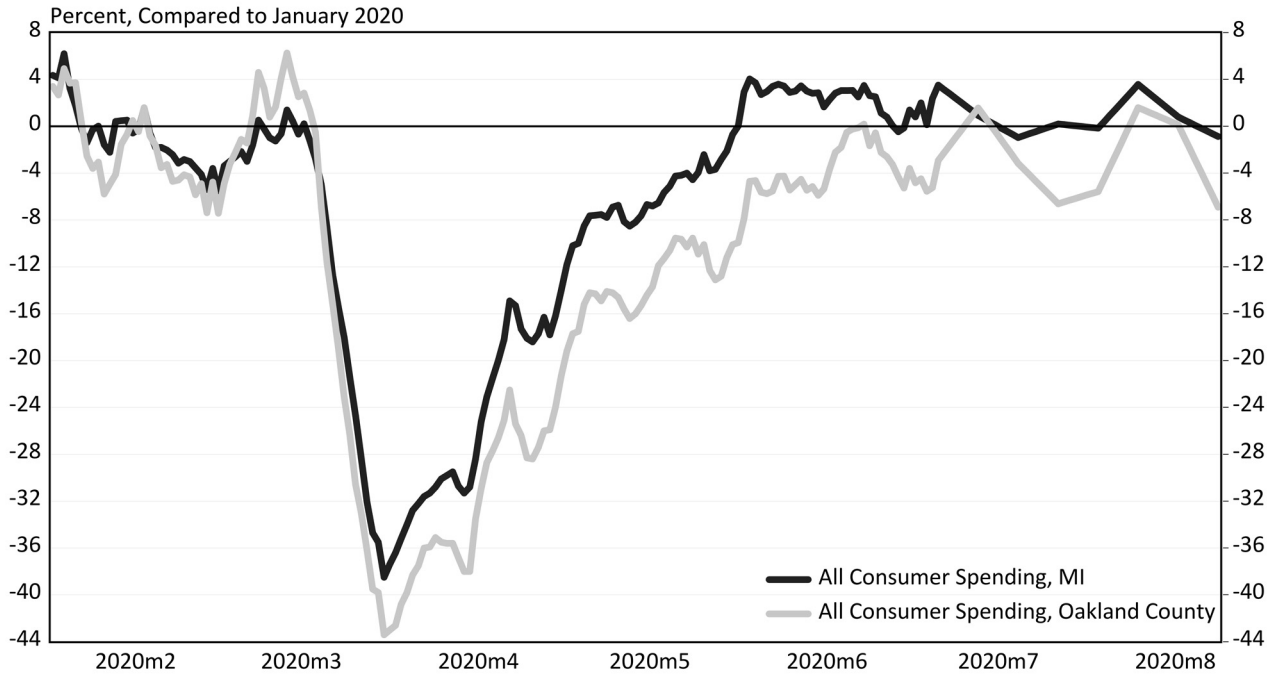


Source: Oakland County Dashboard

- The COVID-19 pandemic has severely disrupted the economy this year, both in Oakland County and beyond. The economy cannot make a complete recovery until the public health situation allows consumers and workers to go about their daily routines safely.
- There are strong day-of-the-week patterns in reported new cases of COVID-19, so the underlying trend is more visible in the seven-day moving average than in the daily case counts. We focus on seven-day moving averages of both measures here.
- New cases of COVID-19 in Oakland County peaked at nearly 300 per day on April 5th before declining to roughly 10 per day in mid-June. New caseloads have risen since then as more economic activity has resumed, and new cases ranged from roughly 80 to 120 per day from late July through August, with a tick down to roughly 70 at the start of September.
- The profile for fatalities from COVID-19 in Oakland County has followed a different trajectory than new caseloads. Fatalities from COVID-19 peaked at a level of approximately 25–30 per day in the first half of April, and they have since fallen to below one per day on average.
- Unlike new cases of COVD-19, fatalities have not shown a tendency to rise as economic activity in Oakland County has recovered.
- The distinct patterns of new cases of COVID-19 and mortality from the disease are consistent with statewide data and with other metrics such as hospitalization rates. We attribute the recent divergence to an improved standard of care, wider testing for the disease, and more favorable demographics among the newly infected.
- It remains to be seen how the pandemic will progress as schools and colleges reopen, the weather turns cooler, and more activity moves indoors. While we expect to see localized outbreaks of new COVID-19 cases, related especially to schools and colleges reopening, we do not expect a return to the uncontrolled spread of the disease seen this spring.
- We believe that the improvements in testing, tracing, and treatment will allow Oakland's economy to operate with roughly the same level of precautions it currently has in place until a vaccine becomes widely available, which we hope will occur by mid-2021.

Figure 2

Consumer Spending in Oakland County & Michigan, February–August, 2020

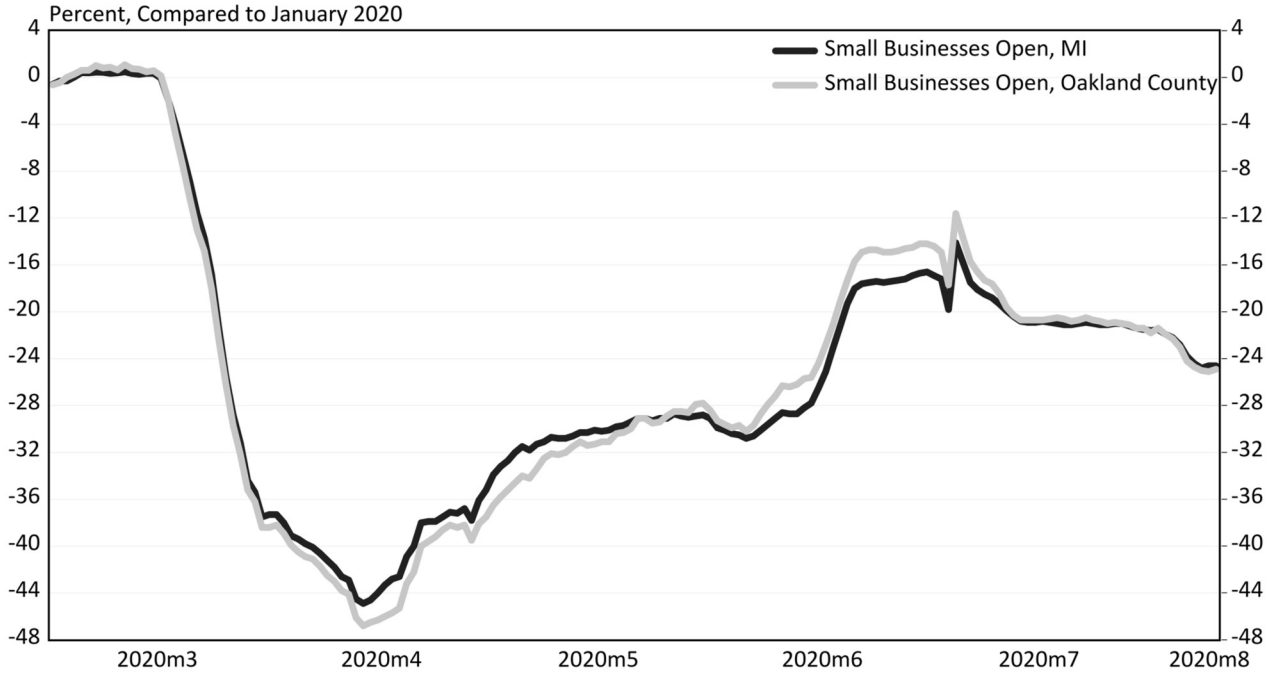


Source: Affinity Solutions via Opportunity Insights

- Because of the severe and fast-moving disruption COVID-19 has brought about in the economy, we have started to track many non-traditional data sources that provide a high-frequency look at the economic recovery.
- This chart displays data on daily consumer spending at businesses in Oakland County in the yellow line and the state of Michigan in the blue line. The data are gathered from credit and debit card transactions tracked by Affinity Solutions via Chetty, Friedman, Hendren, Stepner, and the Opportunity Insights Team (2020).
- Consumer spending fell by over 40 percent in Oakland County as of late March–early April relative to its January average. A strong rebound began in mid-April, around the time that the Economic Impact Payments and increased unemployment insurance (UI) benefits provided in the Coronavirus Aid, Relief, and Economic Security (CARES) Act began.
- The daily spending data is volatile. Consumer spending in Oakland County ran between 7 percent below and 2.5 percent above its January average since July 1st, averaging 1.7 percent below the January level.
- The springtime drop in consumer spending was a bit less severe in Michigan overall than in Oakland County, which we attribute primarily to Southeast Michigan experiencing the initial wave of the pandemic more severely than the state as a whole.
- Consumer spending statewide recovered to its pre-pandemic level at the end of May, and has stayed above or near that level since then.
- Dips in consumer spending both in Oakland County and in Michigan are visible in the graph in the second half of August, which we attribute to the expiration in late July of the Federal Pandemic Unemployment Compensation program that supplemented regular UI benefits with an additional $600 per week.
- We attribute the slightly more robust performance of consumer spending in Michigan overall relative to Oakland County to the structure of the income support provided by the CARES Act. Income replacement was generally higher proportionally in lower-income regions. Oakland County is more prosperous on average than Michigan overall, so we believe that the CARES Act did less to protect Oakland residents' incomes and local consumer spending.

Figure 3

Small Businesses Open in Oakland County & Michigan, March–August, 2020



Source: Womply via Opportunity Insights

- This chart displays data on the number of small businesses open in Oakland County in the yellow line and the state of Michigan in the blue line. The data are produced by Womply and provided via Chetty, Friedman, Hendren, Stepner, and the Opportunity Insights Team (2020).
- The number of small businesses open in Oakland County fell by nearly 50 percent as of early -to-mid-April relative to its January average.
- The number of small businesses open has recovered partially since then, but the recovery in small businesses open has been noticeably weaker than the recovery in total consumer spending.
- The number of small business open in Oakland County recovered to 11.6 percent below the January average on July 4th, but it has since given up some of those gains. As of early August, the number of small businesses open in Oakland was roughly 25 percent lower than in January.
- The pattern of small businesses open in Oakland County has tracked the statewide pattern closely.
- The number of small businesses open nationwide has held up a bit better than in Michigan or in Oakland County. It stood 19.1 percent below its January average level as of early August.
- Statewide, small business closures have remained especially acute in the leisure and hospitality sector. County-level data is not available at the sector level.

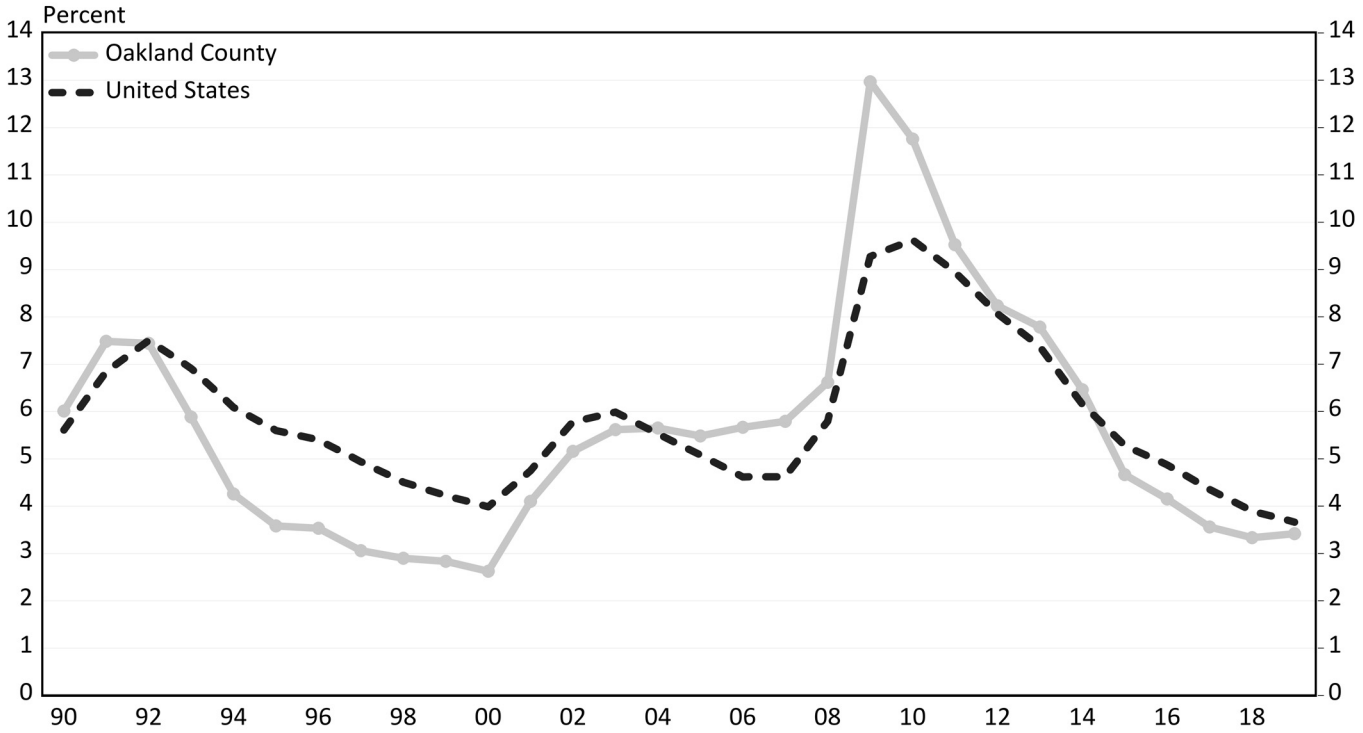
Figure 4

Job Growth in Oakland County, 1991–2019

- Oakland County's economy added 182,700 jobs from 1990 to 2000, an average pace of 2.8 percent per year.
- The county gave up the majority of that growth during the 2000s, shedding 156,500 jobs. That came to an average rate of decline of 2.2 percent annually. In total, the county lost 86 percent of the jobs it had gained in the preceding decade.
- The 2010s saw a return to growth in Oakland County. Through 2019, the county added back 135,000 jobs, registering an average growth rate of 2.2 percent per year.
- Job growth in Oakland was a bit slower than the recent average pace over the past two years, coming in at 1.2 percent in both 2018 and 2019, as the county's relatively low unemployment rate began to constrain potential job growth.
- In our view, Oakland County's recent success has reflected the diversification of the county's economy toward future growth sectors, which has been enabled by the county's well-educated labor force.
- Unfortunately, the COVID-19 recession that started in March of this year has temporarily upended the county's growth.
- The focus of this report is on Oakland County's economic prospects going forward into the post -COVID-19 era.
- There is substantial uncertainty surrounding the nation's economic prospects, and the outlook for Oakland County is no different. We have had to make several strong assumptions about the future course of the pandemic and the federal economic policy response to produce the forecast in this report. If those assumptions turn out to be incorrect, Oakland County's economy is likely to evolve differently than we have forecast.
- We nonetheless hope that this forecast is useful for decision makers in Oakland County and beyond as they plan for an uncertain future.

Figure 5

Unemployment Rates for Oakland County and for the United States, 1990–2019



- Oakland County's unemployment rate fell from 7.5 percent in 1991 to a low point of 2.6 percent in 2000.
- Oakland's unemployment rate climbed to 6.6 percent by 2008 amid Michigan's "one-state recession," before spiking during the Great Recession to 13.0 percent in 2009 and 11.8 percent in 2010.
- Oakland County's unemployment rate came down sharply in the years following the Great Recession. Oakland's rate fell below the national rate in 2015, and stayed there every year from then through 2019.
- Oakland's unemployment rate averaged 3.3 percent in 2018 before moving up by one-tenth of a percentage point to 3.4 percent in 2019. The U.S. unemployment rate averaged 3.7 percent in 2019, three-tenths of a percentage point above Oakland County's unemployment rate for the year.
- The Bureau of Labor Statistics estimates that Oakland County's not seasonally adjusted unemployment rate jumped from 2.9 percent in February to 19.5 percent in March. The preliminary estimate is that it declined to 8.1 percent in July.

Table 2

Oakland County Compared with its Peers*

County	State	Population 2018	Associate's Degree or More	Child Poverty	Median Family Income**	High-Income Persons Aged 65 or Older	Managerial, Professional	Sum of Rankings	Rank of Sum
Fairfax	VA	1,148,463	1	2	1	1	1	6	1
Montgomery	MD	1,048,478	2	4	4	2	2	14	2
Collin	TX	1,004,307	5	1	2	12	4	24	3
Wake County	NC	1,091,273	3	13	7	9	3	35	4
Nassau	NY	1,357,534	10	3	6	4	13	36	5
DuPage	IL	927,247	6	5	3	13	11	38	6
Bergen	NJ	932,816	9	6	9	10	8	42	7
Westchester	NY	968,213	11	10	10	5	10	46	8
Oakland	**MI**	**1,256,694**	**8**	**9**	**5**	**16**	**9**	**47**	**9**
Hennepin	MN	1,257,925	4	15	8	17	7	51	10
Contra Costa	CA	1,150,519	17	8	17	3	16	61	11
Travis	TX	1,246,572	14	20	11	11	6	62	12
Fulton	GA	1,050,131	7	23	14	15	5	64	13
Fairfield	CT	943,971	15	17	12	7	15	66	14
Suffolk	NY	1,480,830	20	7	16	8	21	72	15
St. Louis	MO	995,219	16	21	13	19	14	83	16
Allegheny	PA	1,217,281	12	18	15	27	12	84	17
Mecklenburg	NC	1,093,750	13	22	19	22	18	94	18
Prince George's	MD	909,619	35	14	20	6	22	97	19
Salt Lake	UT	1,148,692	24	12	18	20	23	97	19
Honolulu	HI	979,858	22	11	22	14	34	103	21
Franklin	OH	1,307,698	21	30	23	23	17	114	22
Gwinnett	GA	927,337	23	16	21	26	31	117	23
Erie	NY	919,717	18	25	25	32	20	120	24
Palm Beach	FL	1,482,876	25	24	29	18	30	126	25
Sacramento	CA	1,538,746	32	27	24	21	25	129	26
Hillsborough	FL	1,451,919	26	26	27	28	26	133	27
Pinellas	FL	973,058	28	19	28	31	27	133	27
Cuyahoga	OH	1,241,718	27	33	26	33	19	138	29
Pima County	AZ	1,036,554	29	29	30	24	33	145	30
Orange	FL	1,381,540	19	31	31	35	29	145	30
Duval	FL	948,652	31	28	32	29	28	148	32
Shelby	TN	936,365	34	36	33	25	36	164	33
Marion	IN	958,700	30	32	34	34	35	165	34
Milwaukee	WI	946,969	33	34	35	36	32	170	35
Philadelphia	PA	1,583,592	36	37	37	37	24	171	36
Fresno	CA	991,950	37	35	36	30	37	175	37
Bronx	NY	1,432,087	38	38	38	38	38	190	38

*All counties in the United States with a population between 900,000 and 1,600,000 in 2018

**Adjusted for cost of living

Source: American Community Survey 2018. Census Bureau Population Estimates, March 2020.

- We ranked Oakland County among its peers on five measures that we believe provide useful insights into the county's economic well-being. We considered all counties in the United States with populations between 900,000 and 1.6 million residents in 2018 as Oakland's peer group. A total of 37 other counties matched this description, with Oakland's population of 1.26 million in the middle of the pack.

- Many of the nation's most successful counties are included in this group. Like Oakland, many are also among the select group of U.S. counties that have a AAA bond rating with multiple rating agencies.

- In Table 2, we arrange the 38 counties by the sum of their rankings across the various measures to calculate an overall ranking. Oakland places 9th overall, down three places from its ranking a year ago. The annual data can be noisy, however, and we believe that Oakland's top-ten ranking among this group of counties reflects its solid economic fundamentals, which should position the county for a solid economic rebound from the current downturn.

- The five measures we consider are: (1) educational attainment—the share of the population aged 25 to 64 with at least an associate's degree in 2018; (2) child poverty—the share of the population aged 17 and under who lived within families whose income was below the poverty level in 2018; (3) median family income adjusted for the local cost of living in 2018; (4) high-income seniors—the share of persons aged 65 and older with income at least five times the poverty line in 2018; and (5) professional occupations—the share of employed county residents working in professional and managerial occupations in 2018.

- A lower number for a rank indicates a better position among the counties: a rank of 1 is the best and 38 is the worst. Oakland County ranks between 5th and 16th across the various measures (the underlying data for Table 2 is presented in the appendix).

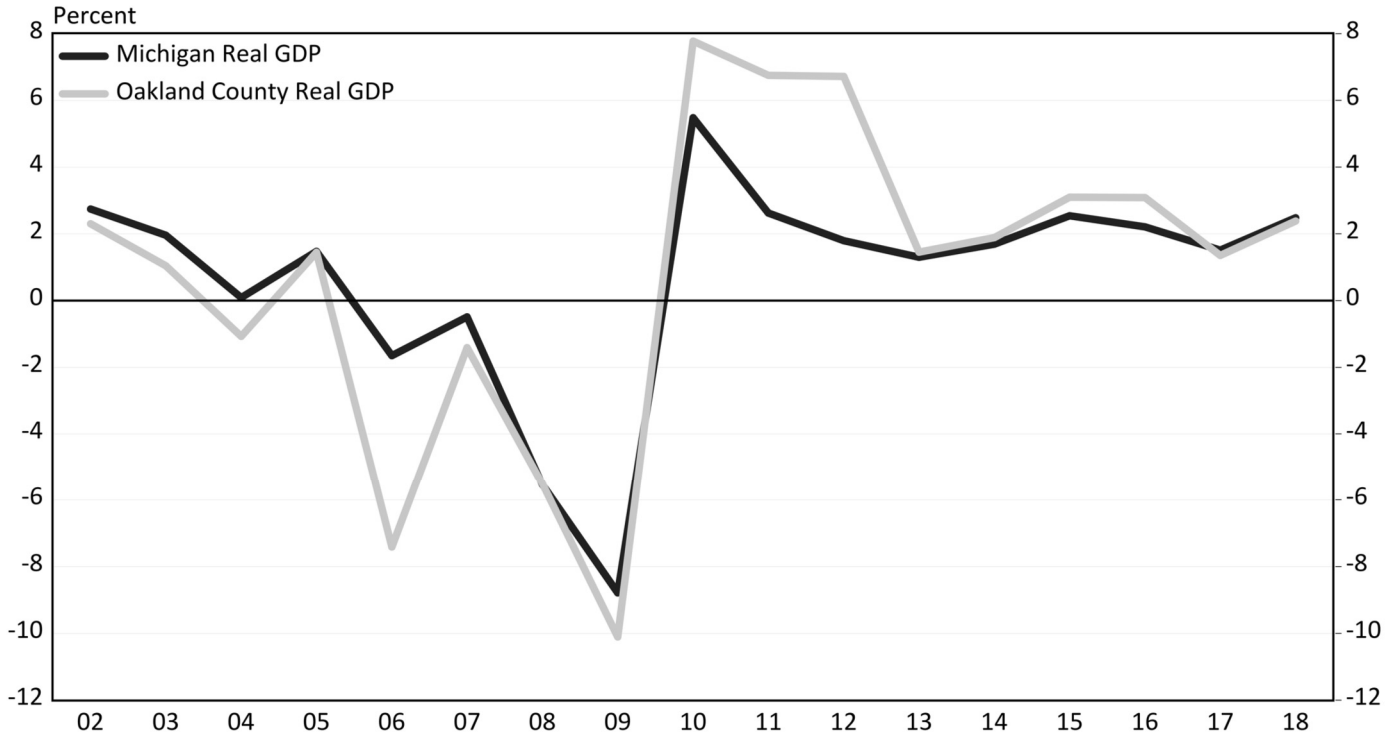
- Oakland ranks within the top ten in each of the following categories: median family income (5th), educational attainment (8th), child poverty (9th), and professional occupations (9th). Oakland's placement in these categories has helped it to maintain its overall top-ten position among its peer group. This is an impressive achievement considering that a number of these counties contain some of the top-rated local economies in the nation.

- Oakland's lowest ranking came in the share of high-income seniors, but the county's ranking of 16th on this metric still placed the county within the top half of its peer group.

- We believe Oakland County's strong overall performance in these measures suggest it is well positioned for the future despite the current challenges facing the local and national economies. The combination of an educated populace, a high share of managerial and professional jobs, and an attractive standard of living should provide a solid foundation for economic prosperity over our forecast period and in the years to come.

Figure 6

Michigan and Oakland County Real GDP Growth, 2002–2018

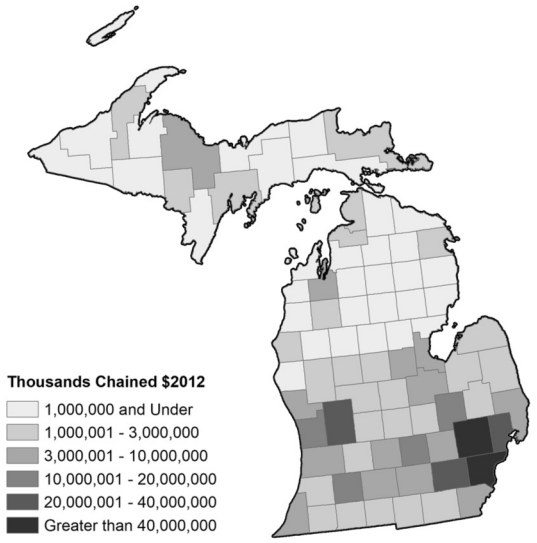


- The Bureau of Economic Analysis recently released county-level statistics for annual Gross Domestic Product (GDP). GDP measures the value of all of the goods and services produced in a particular location over a specific time period. Real GDP adjusts that measure for inflation, in this case to be expressed in 2012 dollars.
- Figure 6 displays the annual percent change in real GDP both in Oakland County and in Michigan between 2002 and 2018.
- From 2002 to 2009, real GDP growth in Oakland County tended to under-perform the state of Michigan. Over that period, real GDP declined by almost 20 percent in Oakland County compared to a decline of slightly more than 10 percent in Michigan.
- Since 2009, real GDP has tended to grow faster in Oakland County than in the state overall, especially in the first few years of the economic recovery from the Great Recession. Between 2009 and 2018, real GDP grew by 40 percent in Oakland County compared to 24 percent in Michigan.
- Over the entire period 2001 through 2018, real GDP grew slightly faster in Oakland County (13 percent) than in the state overall (11 percent).
- The county-level statistics do not provide a high level of industrial detail, but it is logical that Oakland's economy, which is closely tied to the cyclical automotive industry, would display significant variation over the business cycle.

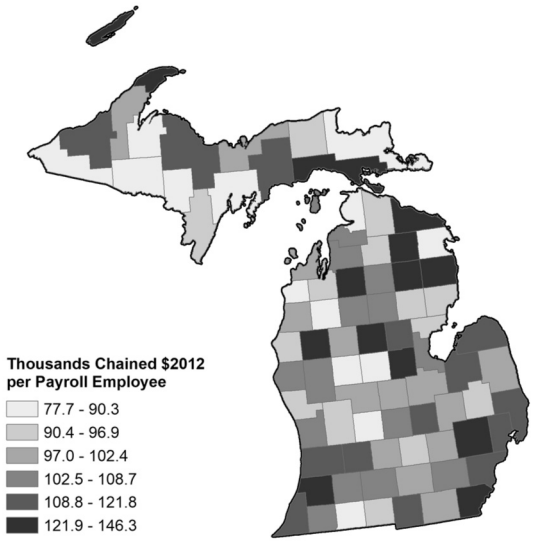
Figure 7

Oakland County Real GDP, 2018

2018 Real GDP



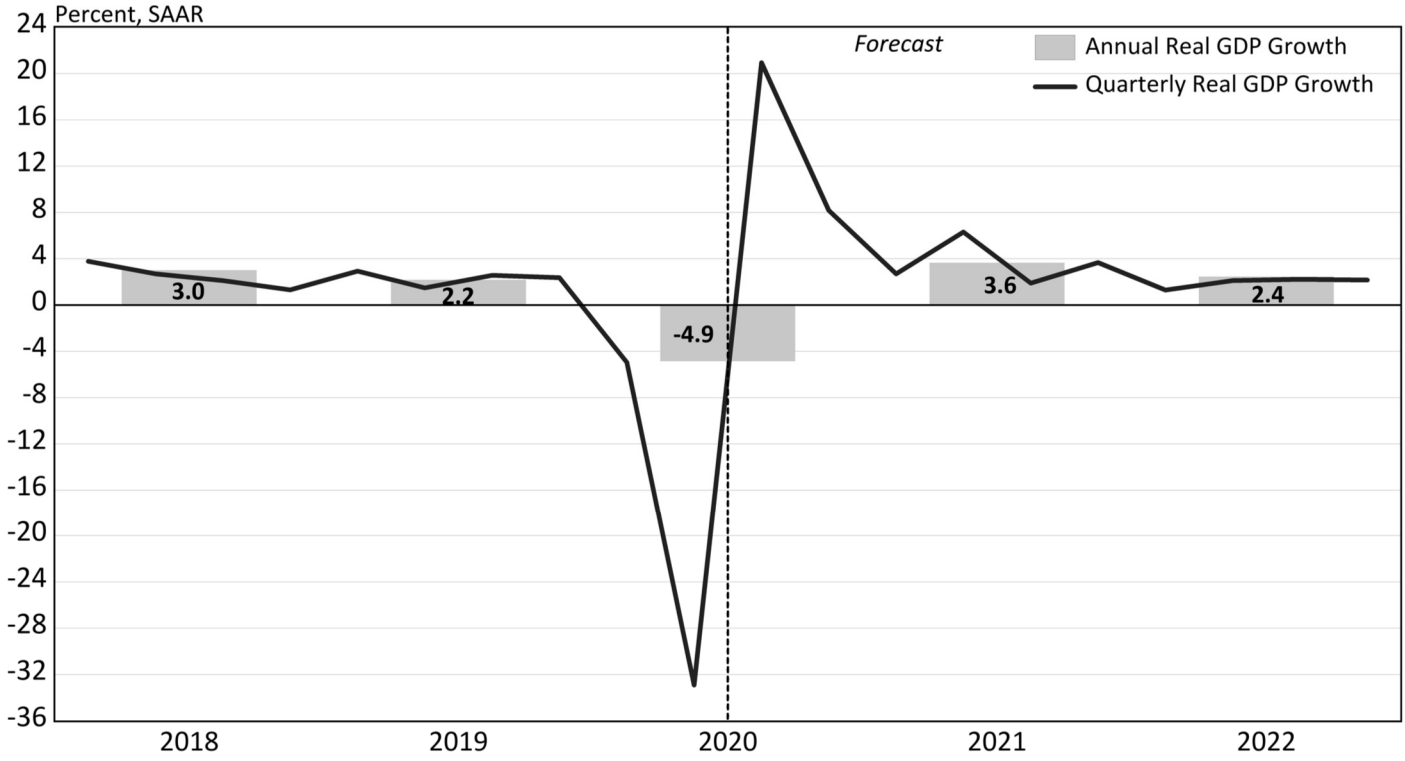
2018 Real GDP per Worker



- The left-hand map above shows real GDP for each of Michigan's counties in 2018, the most recent year for which data is available.
- Oakland County's real GDP totaled $101 billion in 2018. That was the largest GDP out of all of the counties in Michigan, about 15 percent larger than the next-largest level, in neighboring Wayne County. In fact, Oakland County accounted for 21 percent of Michigan's real GDP in 2018.
- Private service-producing industries accounted for 74.2 percent of Oakland County's real GDP in 2018. Private goods-producing industries accounted for 21.6 percent, while government accounted for just 4.2 percent.
- Relative to Michigan overall, a higher share of Oakland County's GDP comes from private-sector service industries and lower shares come from private goods and government.
- The right-hand map above shows 2018 real GDP divided by the number of payroll employees, or output per worker, for each of Michigan's counties.
- Oakland County's real output per worker was $136,900 in 2018, about 26 percent higher than the state average. Oakland's level ranked fifth out of the state's counties.
- The four counties with higher levels of output per worker in 2018 were Mackinac, Monroe, Keweenaw, and Presque Isle. With the exception of Monroe, the real output of each of these counties was less than 1 percent of Oakland's in 2018; Monroe's total output was 6 percent of Oakland's in 2018. We believe that the rankings on this measure should be taken with a grain of salt given the size differences.
- Wayne County had real output per worker of $121,300 in 2018, which was 11.4 percent lower than Oakland's level. Kent, Macomb, and Washtenaw Counties, with the state's third- through fifth-largest economies, all had real output per worker in the $100,000–$110,000 range, more than 20 percent lower than Oakland's.
- Private sector output per worker in Oakland County was even higher in 2018 than the overall level, at $139,800. In the government sector, output per worker was $93,000.

Figure 8

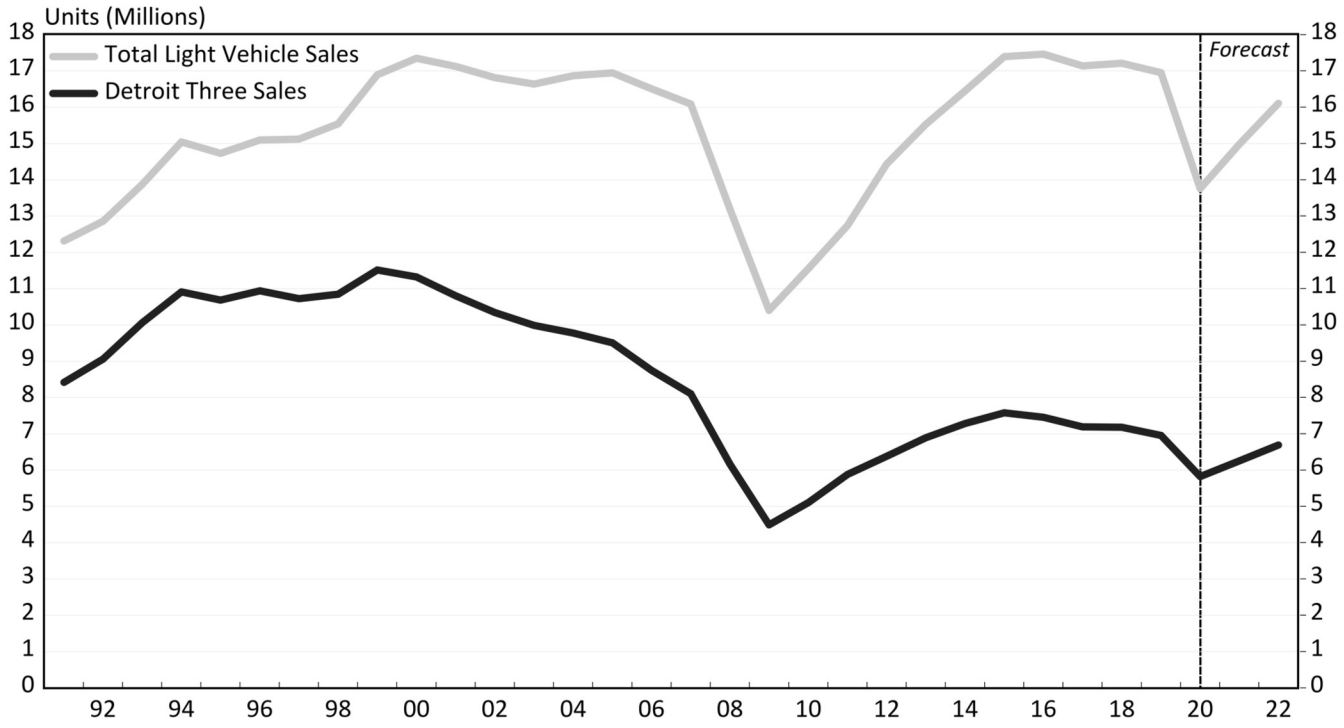
U.S. Real GDP Growth, 2018–2022



- Oakland County's economic future is closely tied to the overall health of the national economy. The health of both economies in turn depends strongly on the public health situation.
- According to the Bureau of Economic Analysis's Advance Estimate, U.S. real GDP fell by 9.5 percent from the first quarter to the second quarter of 2020, or 32.9 percent at an annualized rate. The decline in the second quarter followed a decline of 1.3 percent (5.0 percent annualized) in the first quarter of the year.
- We are forecasting real GDP to grow by 4.9 percent, (20.9 percent annualized) in the third quarter and by another 2.0 percent (8.2 percent annualized) in the fourth quarter. That growth path would leave real GDP 4.4 percent lower at the end of this year than it was at the end of 2019.
- Our forecast calls for real GDP to decline by 4.9 percent on a calendar year average basis from 2019 to 2020.
- We expect the pace of the recovery to slow in 2021. We anticipate above-trend growth in the second quarter of the year, however, when we assume that a vaccine for COVID-19 will become widely available.
- We forecast annual real GDP growth to register 3.6 percent in 2021 and 2.4 percent in 2022.
- Real GDP recovers to its pre-pandemic level by the third quarter of 2022 in our forecast, and ends the forecast period about one percent higher than it was at the end of 2019.
- We have assumed that Congress will pass, and the President will sign, a substantial additional stimulus bill this fall, but as of the writing of this report, no deal was in place. If no additional stimulus is forthcoming, we would expect the recovery to proceed more slowly than we have forecast.
- We expect the Federal Reserve to continue to provide substantial monetary support for the recovery. We anticipate short-term interest rates staying near zero throughout our forecast horizon. We view the Fed's recent shift to "average inflation targeting" as a modestly helpful step toward encouraging nominal income growth.

Figure 9

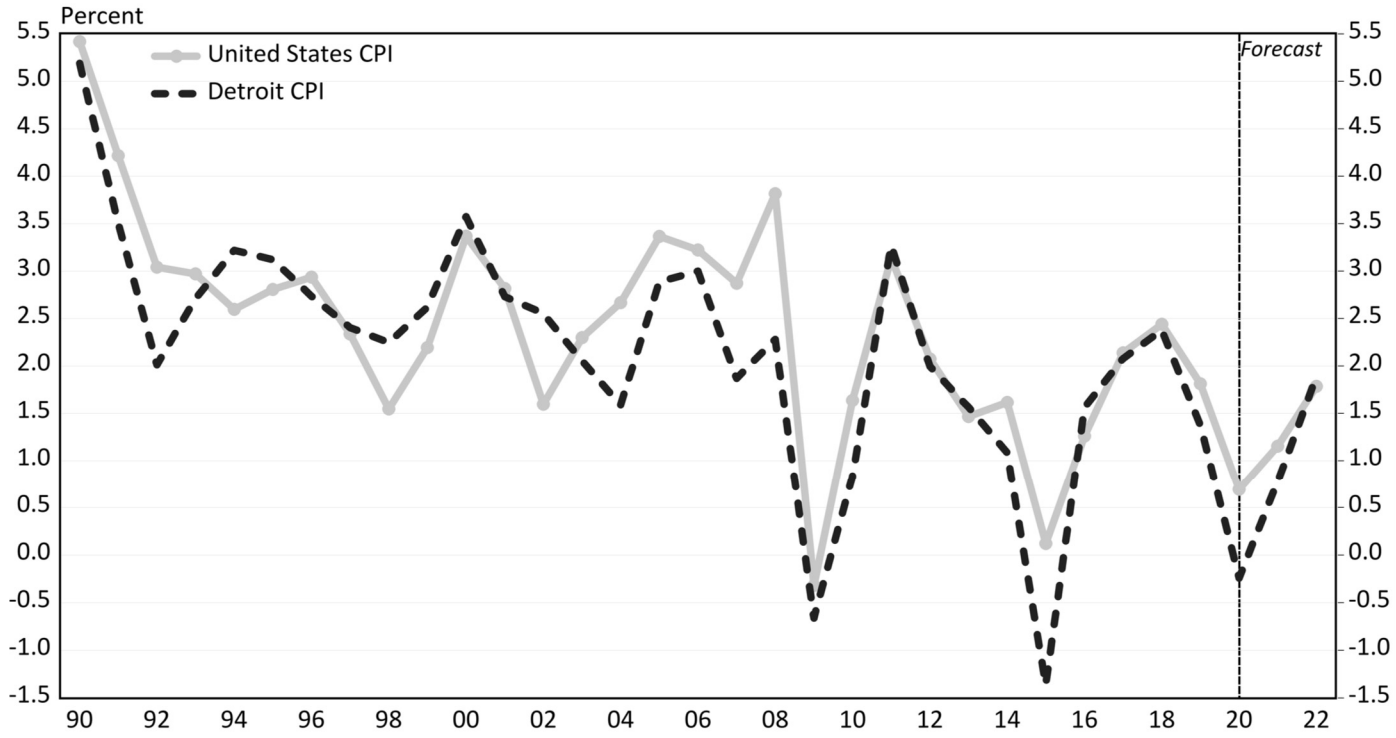
U.S. and Detroit Three Light Vehicle Sales, 1991–2022



- National light vehicle sales took a nosedive during the spring, registering 8.7 million at a seasonally adjusted annual rate in April. That was the slowest monthly pace on record since the beginning of the modern data series in 1976.
- Total light vehicle sales have risen sharply since April, registering a 15.2 million unit pace in August. For comparison, light vehicle sales stayed below the 10-million unit pace for six straight months in 2009.
- We expect total light vehicle sales to amount to 13.8 million units this year, a reduction of approximately 19 percent from the 2019 pace of 17.0 million. Low inventory levels, domestic capacity constraints, and the severity of the pandemic in Mexico all limit the rebound this year, as does consumer demand.
- We are forecasting unit sales to climb to 15.0 million next year and to 16.1 million in 2022 as the broader economy recovers, the public health situation improves domestically and abroad, and supply constraints are resolved.
- We expect the light truck share of the total market to hover around 75–77 percent on an annual basis over our forecast period.
- We project the Detroit Three's share of the light vehicle market to average 42.3 percent this year, up a bit from its level of 41.0 percent in 2019. The Detroit Three's share of the market declines back to the 41–42 percent range over the next two years.
- We forecast Detroit Three sales to total 5.8 million units this year. That would be a decline of roughly 16 percent from their 2019 pace of 7.0 million units, but it would be nearly thirty percent higher than their pace in 2009.
- We forecast Detroit Three light vehicle sales to rise to 6.3 million units in 2021 and 6.7 million in 2022.

Figure 10

Inflation Rate, National and Detroit CPIs, 1990–2022



- We measure local inflation by the growth rate of the Detroit Consumer Price Index (CPI), as county-level consumer price data are not available.
- We believe the COVID-19 pandemic has substantially reduced both aggregate supply and aggregate demand in the United States economy, but we judge the demand shock to be bigger than the supply shock.
- Accordingly, we expect national CPI inflation to fall from 1.8 percent in 2019 to 0.7 percent this year. One contributor to the decline in headline inflation is falling energy prices, which despite recovering from their rock bottom levels this spring remain well below their year-ago levels. Core CPI inflation, which strips out volatile food and energy prices, registers 1.2 percent this year.
- We expect headline CPI inflation to pick back up to 1.2 percent next year and 1.8 percent in 2022 as the economy recovers from the pandemic and the Federal Reserve's monetary stimulus has the desired effect of growing the volume of nominal expenditure.
- We are forecasting a return to local deflation this year for the first time since 2015, with the Detroit CPI declining by 0.2 percent in 2020.
- Local inflation returns to positive territory in 2021 and 2022, registering 0.8 percent and 1.9 percent, respectively.
- The inflation rates we are forecasting are substantially below the Federal Reserve's symmetric 2 percent inflation target for the Personal Consumption Expenditures (PCE) deflator. PCE inflation tends to run below CPI inflation.
- In that case, the Federal Reserve's recently announced average inflation targeting policy should lead to some moderate "catch-up" inflation in the years beyond our forecast period.

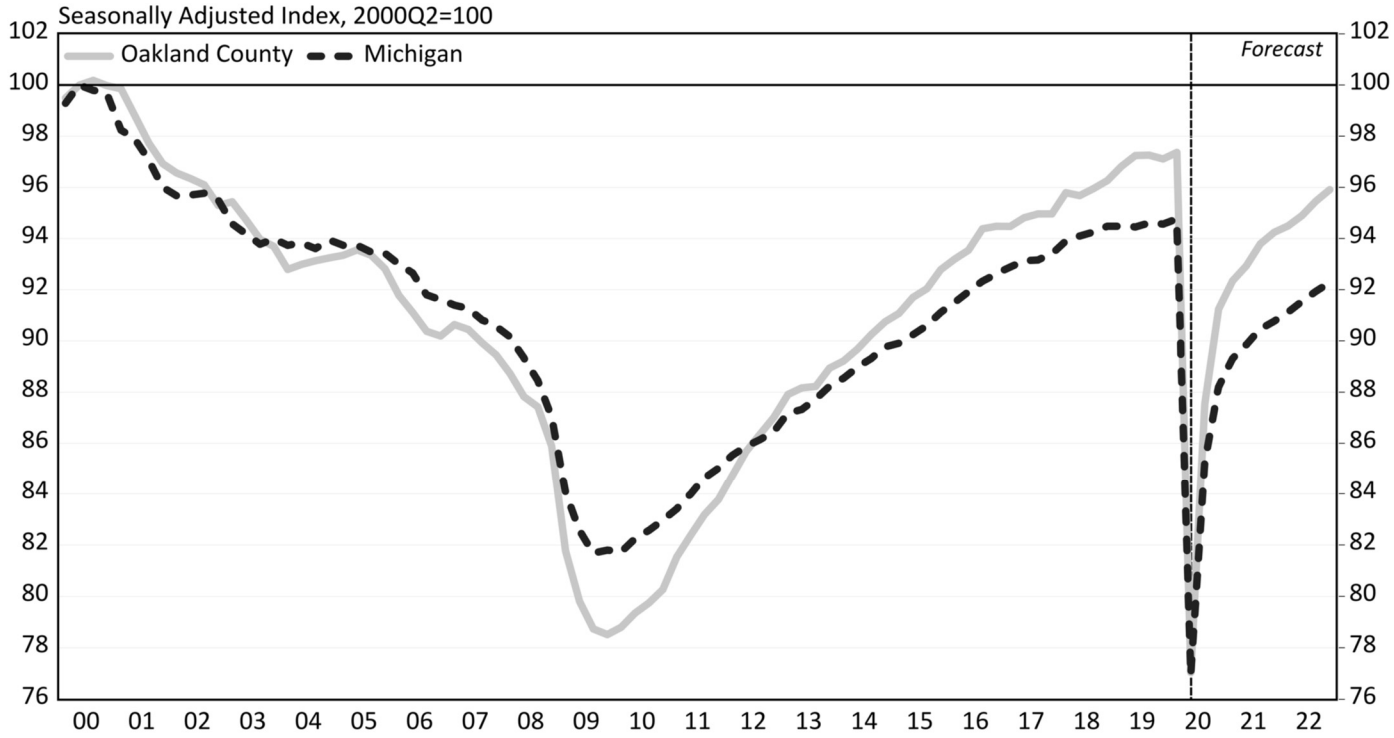
Figure 11

Job Growth in Oakland County, 1991–2022

- By the end of 2019, on a quarterly basis, Oakland County had completed ten consecutive years of job growth since the recession's low point at the end of 2009.
- The small number of job losses recorded in 2010 is a statistical artifact that results from calendar-year averaging. The county actually gained jobs in each quarter of the year, but not quickly enough to take the annual average above its level in the previous year.
- The county also added jobs in the first quarter of 2020, making 10 and one quarter years of job growth, the longest such streak since the data has been collected.
- The bottom fell out of the national and local economies in the second quarter of 2020. The nation lost 18.2 million jobs in the quarter, and we estimate that Oakland County lost 156,100 jobs (on a seasonally adjusted basis).
- Oakland County's job losses in the second quarter totaled nearly the same number of jobs the county lost in the entirety of the 2000s—in only one quarter.
- Fortunately the rebound so far has also been impressive by historical standards. On an annual average basis, the county is forecast to end up losing only 68,000 jobs in 2020. That performance would translate to a decline of 9.1 percent.
- We expect that the county will recover an additional 39,100 jobs in 2021 (5.8 percent) and 14,300 jobs in 2022 (2.0 percent).
- Thus, we are forecasting that average annual employment in Oakland County in 2022 will remain 14,700 jobs, or 2.0 percent, short of 2019 levels.

Figure 12

Total Jobs in Oakland County and Michigan, Seasonally Adjusted, First Quarter of 2000 to Fourth Quarter of 2022



- To put the current downturn in perspective, we plot Oakland County's quarterly path of total employment from the beginning of 2000 to the end of our forecast period in 2022. We include the same path for the state of Michigan.
- We index both employment paths to equal 100 in the second quarter of 2000, when Michigan reached its peak employment level. Oakland reached its peak employment level one quarter later, in the third quarter of 2000.
- Oakland County lost 166,500 jobs from then until the fourth quarter of 2009, its Great Recession-era low point. That was 21.6 percent of its peak level. Michigan lost 859,100 jobs in that time, 18.3 percent of its peak level.
- We estimate that Oakland recovered 144,800 jobs from the end of 2009 to the first quarter of 2020, which was more vigorous proportionally than Michigan overall.
- We also estimate that Oakland County suffered a sharper proportional drop in employment than the state overall in the second quarter of 2020.
- The estimated job loss in the second quarter was so severe that, both in the county and in the state, employment was lower in the second quarter of 2020 than it was at the end of 2009.
- We forecast that Oakland County will begin to recover jobs beginning in the third quarter, cumulating to 144,900 by the end of 2022—leaving the county 11,200 jobs (1.5 percent) short of first-quarter 2020 levels at the end of our forecast. (These numbers differ from the values using calendar-year averages reported alongside Figure 9 because they are from the first quarter of 2020 to the end of 2022.)
- As figure 12 shows, we are expecting that Oakland will enjoy a faster job recovery than Michigan overall, so that the gap between the two index lines widens from 2.6 points in the first quarter of 2020 to 3.6 points at the end of 2022.

Table 3

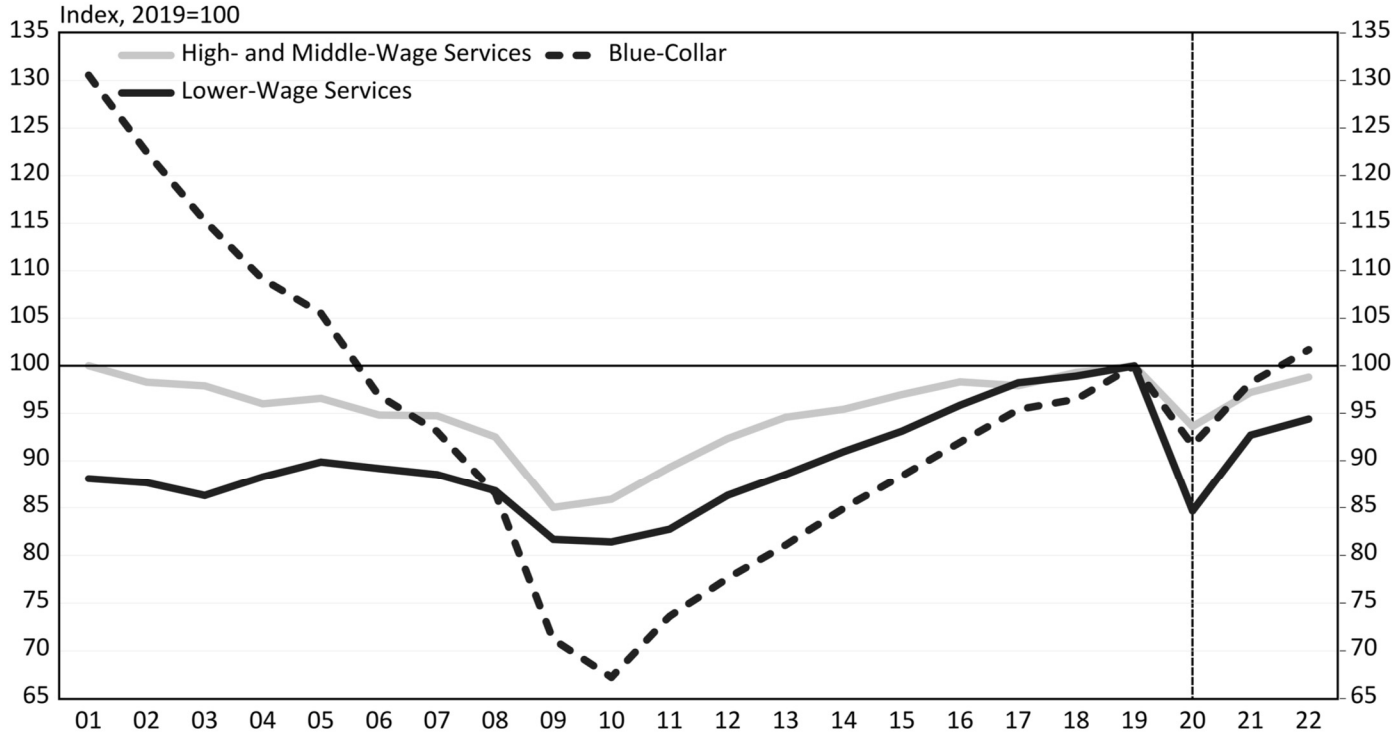
Forecast of Jobs in Oakland County by Major Industry Division, 2019–2022*

	Preliminary	Forecast Employment			Average Annual Wage
	2019	2020	2021	2022	2019
TOTAL JOBS (Number of persons)	**746,103**	**678,062**	**717,126**	**731,409**	**63,728**
(Annual percentage change)	(1.2)	(-9.1)	(5.8)	(2.0)	N.A.
TOTAL GOVERNMENT	45,354	42,205	41,976	42,769	55,817
TOTAL PRIVATE	700,750	635,857	675,150	688,640	64,240
GOODS-PRODUCING	97,210	88,636	94,808	97,878	78,975
Natural resources and mining	881	881	881	881	37,299
Construction	27,226	25,908	28,448	29,725	73,179
Manufacturing	69,103	61,847	65,478	67,272	81,790
Food manufacturing	1,781	1,806	1,848	1,887	35,724
Plastics manufacturing	5,547	4,707	5,018	5,127	57,262
Fabricated Metals mfg.	10,001	8,484	9,002	9,179	61,145
Machinery manufacturing	11,378	9,922	10,415	10,621	84,510
Transportation equip.	21,697	18,968	20,192	20,735	104,533
Other manufacturing	18,699	17,961	19,004	19,724	76,448
PRIVATE SERVICE-PROVIDING	603,540	547,221	580,342	590,762	61,867
Trade, transportation and utilities	131,056	122,302	126,917	127,138	56,726
Wholesale trade	37,797	35,417	36,912	37,319	98,364
Retail trade	78,820	73,067	75,140	74,186	36,279
Transportation, warehousing	12,911	12,290	13,338	14,106	51,327
Utilities	1,528	1,528	1,528	1,528	127,103
Information	15,094	14,779	14,914	14,919	86,299
Financial activities	56,174	56,232	57,121	57,668	87,305
Professional and business services	185,126	169,374	178,663	182,566	80,373
Professional, scientific, and technical	104,611	99,490	105,052	107,615	94,258
Engineering & Architecture	40,418	37,429	40,989	42,913	101,348
Computers Services	21,491	20,550	21,169	21,255	94,309
Other Professional & Tech.	42,702	41,511	42,893	43,446	87,522
Management of companies and enterprises	18,886	18,671	18,588	19,131	119,049
Administrative support and waste management	61,629	51,213	55,023	55,820	44,951
Private education and health services	118,537	111,075	116,801	119,061	51,684
Private education services	11,445	10,698	11,283	11,511	43,088
Ambulatory Health Services	42,385	39,233	41,157	41,743	58,766
Hospitals	35,029	32,904	34,291	34,787	65,192
Nursing & Residenital Care	17,259	16,527	17,542	18,050	31,077
Social Assistance	12,420	11,713	12,528	12,969	25,974
Leisure and hospitality	72,372	50,235	59,976	63,155	23,801
Other services	23,277	21,321	24,045	24,352	37,464
Unclassified	1,904	1,904	1,904	1,904	51,308
Addendum					
Labor Force	680,255	648,709	668,516	670,968	
Unemployment Rate	3.4	9.1	7.2	6.0	

*Some subtotals do not add to totals due to rounding of annual average computations.

Figure 13

Jobs in Oakland County by Selected Industry Group, 2001–2022



- Table 3 distributes our projected total job movements for Oakland County from 2019 to 2022 among 36 major industries. The table also includes the average wage in each industry in 2019.
- The industries in Table 3 are reorganized into three categories of industries in figure 13. The three categories are blue-collar industries; high- and middle-wage service industries; and lower-wage service industries. The lower-wage service industries had an average annual wage of less than $40,000 in 2019.
- The blue-collar industries include manufacturing, construction, natural resources and mining, and transportation and warehousing. They accounted for 15 percent of Oakland County's wage and salary employment in 2019.
- The high- and middle-wage service industries include government, wholesale trade, utilities, information, financial activities, business and professional services, education, ambulatory health services, hospitals, and the unallocated services industries. They accounted for 58 percent of Oakland County's wage and salary employment in 2019.
- The lower-wage services industries include retail trade, nursing and residential care, social assistance, leisure and hospitality, and other services. They accounted for 27 percent of Oakland County's wage and salary employment in 2019.
- This categorization illustrates how very different the COVID-19 recession and subsequent recovery is from the Great Recession (and prior recessions) and recovery periods.
- Between 2001 and 2007, Oakland's employment declined by 29 percent in the blue-collar industries but by only 5 percent in the high- and middle-wage service industries. Employment actually grew by 1 percent in the lower-wage service industries.
- During the Great Recession, 2007 to 2009, employment in Oakland fell by a further 24 percent in the blue-collar industries and by a comparatively modest 10 percent in the high- and middle-wage service industries and 8 percent in the lower-wage service industries.

- The county's employment decline in the 2001–2009 period was therefore very heavily weighted toward blue-collar industries. Employment in the lower-wage service industries tended to hold up much better.

- Between 2009 and 2019, employment in all three categories of industries expanded. By 2019, employment in the high- and middle-wage service industries was almost exactly the same as in 2001, and employment in lower-wage services industry was higher by 24,000 jobs. Employment in blue-collar industries, however, was lower than the 2001 level by 34,000 jobs.

- Therefore, an important feature of the county's (and indeed the country's) economy during the 2001–2019 period was a shift away from blue-collar industry jobs toward lower-wage service industry jobs, especially during economic recessions.

- The COVID-19 recession and our forecast for the subsequent recovery reverse this narrative.

- In 2020, the largest job loss in the county occurs among the lower-wage service industries, which see an employment decline of 15 percent. High- and middle-wage service industries and blue-collar industries see significantly smaller employment declines this year, of 6.4 percent and 8.3 percent, respectively.

- The concentration of job loss among lower-wage service industries during a recession is unprecedented. Normally during a recession, job losses are concentrated in manufacturing, construction, and higher-wage white collar industries that are associated with those activities.

- We are forecasting that between 2020 and 2022, both the blue-collar industries and the lower-wage services industries will see employment growth by about 11 percent, while employment in high- and middle-wage services industries will grow by about 5.5 percent.

- Thus, by 2022, employment in the blue-collar industries will be 1,900 jobs higher than in 2019, while employment will be 5,100 jobs lower in the high- and middle-wage service industries and 11,400 jobs less in the lower-wage services industries than in 2019.

- Among the blue-collar industries, the construction and transportation and warehousing industries will lead the job growth between 2019 and 2022, with job gains of 2,500 and 1,200, respectively. Manufacturing employment is expected to decline by 1,800 jobs, as losses in plastic parts, fabricated metals, machinery manufacturing, and motor vehicle and parts manufacturing exceed gains elsewhere in the manufacturing sector.

- Job losses between 2019 and 2022 in the high- and middle-wage service industries are concentrated in administrative support services (-5,800 jobs total) and government (-2,600 jobs total). The job losses in administrative support reflect weak demand for temporary help employees. We expect the government sector to face severe tax revenue shortfalls over the next few years, which will be mitigated only partially by additional federal support.

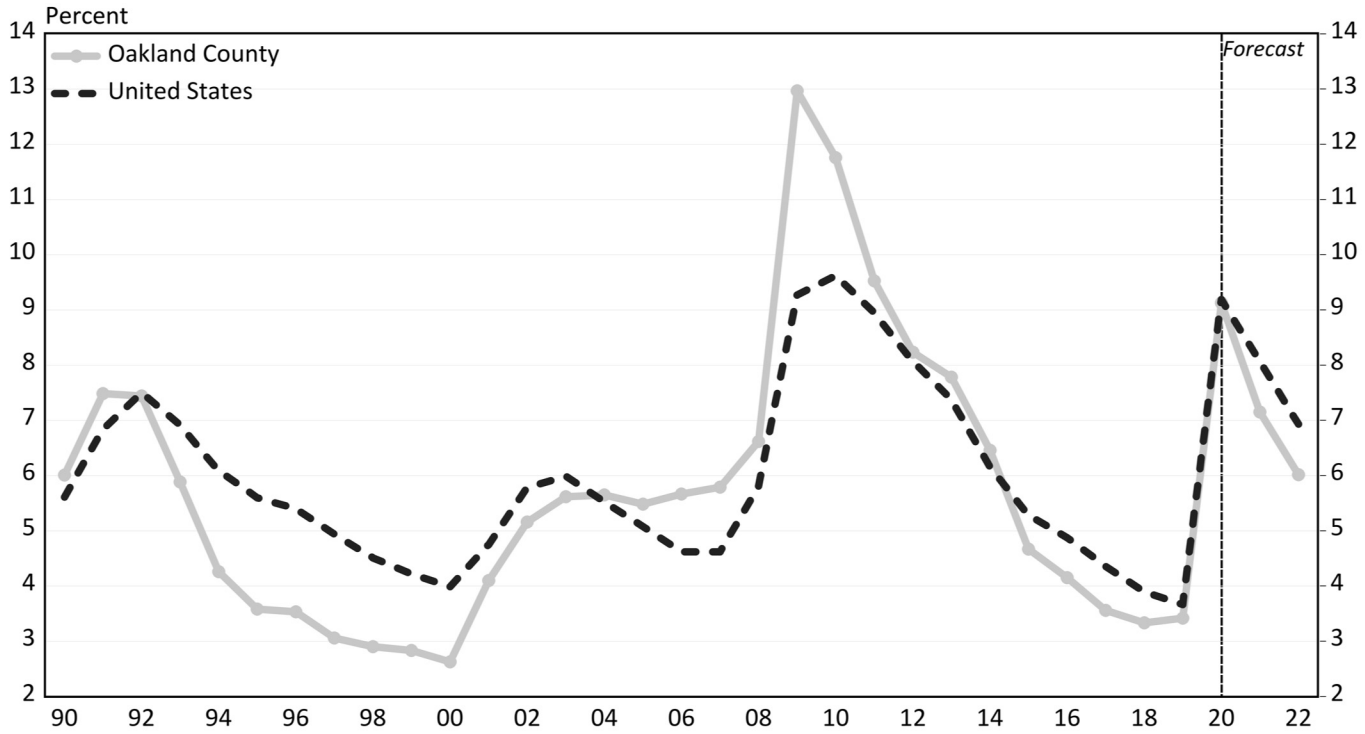
- We are expecting modest job growth in most other high- and middle-wage service industries. One bright spot is engineering services, which we expect to add 2,500 jobs between 2019 and 2022 as the shift toward electric and autonomous vehicles continues in the auto industry.

- Job losses in the lower-wage services industries are concentrated in retail trade (-4,600) and leisure and hospitality services (-9,200). The job losses in retail trade reflect an acceleration of the pre-pandemic trend toward declining employment at brick and mortar retail stores due to internet shopping and productivity gains. We expect that these job losses will continue past 2022.

- The job losses in leisure and hospitality services stem directly from the COVID-19 pandemic. Prior to the pandemic, this industry had been growing by 2.7 percent per year since the end of the Great Recession in 2009. The leisure and hospitality services industry was virtually shut down by the pandemic, and we expect it to reopen only slowly, as a vaccine becomes widely available and business travel resumes. We expect that this industry will continue to grow in the years beyond our forecast period, with employment eventually exceeding 2019 levels, unlike in retail trade.

Figure 14

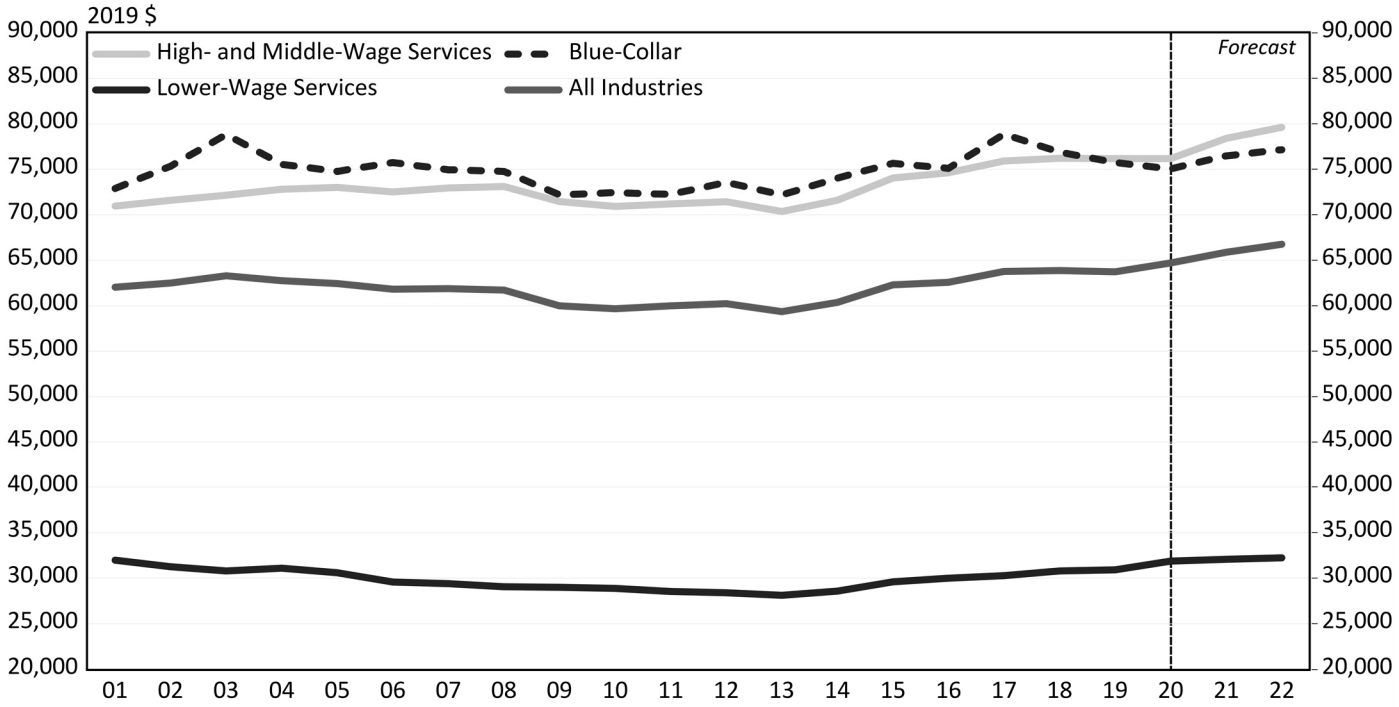
Unemployment Rates for Oakland County and for the United States, 1990–2022



- The job losses we are forecasting for Oakland County drive the unemployment rate up to an average of 9.1 percent for the year in 2020. We expect that the U.S. unemployment rate will be 0.1 percentage points higher, at 9.2 percent.
- In the Great Recession era, Oakland County's not seasonally adjusted monthly unemployment rate peaked at 15.0 percent in July 2009. The local unemployment rate averaged 13.0 percent that year.
- Oakland's unemployment rate spiked to 19.5 percent in April and registered 19.3 percent in May, but based on the recent improvement, we expect it to average well below its 2009 level in 2020.
- One reason the local unemployment rate remains well below 2009 levels is that the local labor force is expected to decline by 4.6 percent this year.
- The local labor force grows by 3.1 percent in 2021 and by 0.4 percent in 2022. Despite that growth, the county's potential workforce in 2022 is 9,300 people smaller than it was in 2019.
- We anticipate continued weakness in labor force growth beyond 2022, so that finding available and qualified workers will become a serious problem for employers once again in the years after 2022.
- For the next couple of years, however, the major problem will remain too many unemployed workers. We expect that the unemployment rate in Oakland County will average 7.2 percent in 2021 and 6.0 percent in 2022.
- We expect that Oakland's unemployment rate in 2022 will be nine-tenths of a percentage point lower than the U.S. rate of 6.9 percent and 0.5 percent below the Michigan rate of 6.5 percent.

Figure 15

Average Real Wage in Oakland County by Selected Industry Group, 2001–2022



- Here we present the average real wage in Oakland County for the years 2001–2022, adjusted for inflation and expressed in 2019 dollars. We display the average real wage across all industries as well as for three broad industry categories as previously described: (1) blue-collar industries; (2) high- and middle-wage service-providing industries and (3) lower-wage service -providing industries.
- In 2003, the average annual real wage in Oakland County reached $63,291. Average real wages then entered a decade in which they trended downwards, hitting a low point of $59,352 in 2013. That level was 6.2 percent lower than in 2003.
- From 2013 to 2017, real wages increased by an average of 1.8 percent per year, buoyed by low consumer price inflation, bringing average real wages to $63,782 in 2017.
- Real wage gains then stalled out, as the average real wage in 2019 ($63,728) was actually $54 less than it was in 2017.
- Real wage growth in our forecast rebounds to 1.6 percent in 2020, 1.8 percent in 2021, and 1.3 percent in 2022, for a total gain of 4.8 percent over the next three years.
- Ironically, part of the reason for the relatively strong aggregate wage growth in our forecast is the shift in the county's industrial composition toward higher paid industries.
- We are forecasting a cumulative increase between 2019 and 2022 of 1.9 percent in the average real wage in blue-collar industries, 4.3 percent in lower-wage services industries, and 4.5 percent in the high- and middle-wage service industries.

Appendix

Oakland County Compared with its Peers Indicator Values*

County	State	Population 2018	Associate's Degree or More	Child Poverty	Median Family Income**	High-Income Persons Aged 65 or Older	Managerial, Professional
Fairfax	VA	1,148,463	67.6%	7.1%	118,107	63.0%	58.0%
Montgomery	MD	1,048,478	64.6%	7.9%	106,881	60.1%	54.1%
Collin	TX	1,004,307	61.6%	6.7%	108,035	43.4%	52.8%
Wake County	NC	1,091,273	62.3%	10.5%	102,785	44.5%	53.3%
Nassau	NY	1,357,534	57.8%	7.3%	103,485	48.7%	46.4%
DuPage	IL	927,247	60.8%	8.2%	107,396	43.3%	47.4%
Bergen	NJ	932,816	59.1%	8.6%	99,837	44.4%	49.2%
Westchester	NY	968,213	57.7%	9.7%	99,049	48.0%	48.7%
Oakland	**MI**	**1,256,694**	**59.2%**	**9.6%**	**104,437**	**37.2%**	**49.2%**
Hennepin	MN	1,257,925	61.8%	11.2%	100,911	36.7%	49.6%
Contra Costa	CA	1,150,519	51.2%	9.3%	90,159	49.3%	45.2%
Travis	TX	1,246,572	56.2%	15.8%	98,151	43.4%	50.1%
Fulton	GA	1,050,131	59.9%	18.3%	91,950	37.2%	51.0%
Fairfield	CT	943,971	56.1%	13.1%	97,238	45.4%	45.6%
Suffolk	NY	1,480,830	48.8%	9.2%	91,025	45.2%	40.7%
St. Louis	MO	995,219	54.5%	16.8%	93,374	35.1%	46.2%
Allegheny	PA	1,217,281	57.2%	15.2%	91,114	28.1%	46.5%
Mecklenburg	NC	1,093,750	56.2%	17.7%	84,061	32.6%	43.1%
Prince George's	MD	909,619	39.4%	11.0%	84,053	47.2%	40.7%
Salt Lake	UT	1,148,692	45.4%	10.4%	89,582	34.8%	40.2%
Honolulu	HI	979,858	48.1%	10.3%	81,304	42.9%	35.9%
Franklin	OH	1,307,698	48.1%	22.3%	80,974	32.1%	43.6%
Gwinnett	GA	927,337	47.4%	11.7%	81,681	28.1%	36.9%
Erie	NY	919,717	50.1%	19.8%	79,287	25.6%	40.7%
Palm Beach	FL	1,482,876	45.1%	18.7%	70,709	36.4%	37.0%
Sacramento	CA	1,538,746	40.5%	20.8%	79,864	34.2%	39.6%
Hillsborough	FL	1,451,919	44.7%	20.5%	73,014	28.0%	39.0%
Pinellas	FL	973,058	42.9%	15.6%	72,061	26.1%	38.6%
Cuyahoga	OH	1,241,718	43.0%	26.6%	77,986	25.2%	41.0%
Pima County	AZ	1,036,554	42.5%	22.0%	69,023	30.7%	36.1%
Orange	FL	1,381,540	49.0%	23.9%	68,148	22.3%	37.3%
Duval	FL	948,652	40.9%	21.8%	68,053	27.5%	37.4%
Shelby	TN	936,365	39.6%	34.6%	67,823	30.1%	34.3%
Marion	IN	958,700	41.2%	24.6%	67,316	22.8%	35.2%
Milwaukee	WI	946,969	39.9%	27.6%	66,038	21.6%	36.1%
Philadelphia	PA	1,583,592	36.8%	34.6%	53,273	19.9%	39.7%
Fresno	CA	991,950	29.1%	30.9%	62,815	27.4%	30.8%
Bronx	NY	1,432,087	28.5%	38.1%	39,681	16.7%	25.0%
State of Michigan			41.5%	19.4%	77,458	25.1%	41.5%
United States			43.2%	18.0%	76,401	29.8%	43.2%

*All counties in the United States with a population between 900,000 and 1,600,000 in 2018.

**Adjusted for cost of living.

Source: American Community Survey 2018. Census Bureau Population Estimates, March 2020. Median Family Income adjusted using BEA price parity indices for 2017 and extended to counties by relative gross rent.

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Oakland County's

Department of Economic Development & Community Affairs

Small Business Services
Oakland County small businesses, from any sector and at any stage, can get free consultations and access to training and other resources. Data, maps, aerial photography and property information is also available to residents through the business center.

Financial Services
Business Finance Corporation and Economic Development Corporation
Small business loans for buildings and equipment.

Planning
Community services for all the cities, villages and townships. Resources are available in the areas of downtown development, historic preservation and design assistance, environmental stewardship, waste resources, brownfield redevelopment, land use and zoning.

Business Development
Helping businesses locate and expand in Oakland County.

Veterans Services
Benefits counselors can provide assistance to veterans and their families filing and appealing claims. Information on grants and resources is also available.

Workforce Development
Helping businesses with talent recruitment, training and retention. Building the talent pipeline through apprenticeships and student career events.

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