



Wayne County Economic Outlook

2021–2023
October 2021



The Wayne County Economic Outlook Update for 2021–2023 Executive Summary: October 2021

Wayne County's economy has made large strides toward recovery from the COVID-19 pandemic. As of July 2021, the county's measured unemployment rate has fallen to 4.5 percent, well below its pre-pandemic level. Employment among county residents has recovered nearly 90 percent of its losses from the beginning of the pandemic. We are projecting continued progress over our forecast horizon, leading to a nearly complete recovery in Wayne County's payroll jobs count by the end of 2023.

In the 47 years from 1969 to 2016, Wayne County's share of Michigan's payroll employment declined by more than half. From 2016 to 2019, the county's employment growth slightly outpaced the state's, and we expect the economic recovery through 2023 to be a bit stronger in Wayne County than statewide, as well. Our optimism about the county's recovery is driven in part by our expectation of ongoing growth in the city of Detroit, where several large projects are underway that should lead to substantial job gains. The county's transportation industry, anchored by Detroit Metro Airport and bridge and tunnel links to Canada, also positions Wayne favorably for growth as we exit the pandemic.

We are especially optimistic about the outlook for Wayne County's finance and insurance, transportation equipment manufacturing, and transportation and warehousing industries. Each of these industries ends our forecast with employment substantially higher than before the pandemic. On the other side of the ledger, we expect Wayne's accommodation and food services and arts, entertainment, and recreation industries to lag well behind their pre-pandemic employment levels even by the end of 2023.

Average wages in Wayne County have long outpaced the statewide average, and we expect that gap to persist throughout our forecast period. Average inflation-adjusted wages in the county jumped by nearly 7 percent in 2020, as more lower-wage workers lost their jobs than higher-wage workers. We

expect average real wages in Wayne County to slip a bit this year and to hold roughly flat next year, as lower-wage workers return to the job. Modest real wage growth returns in 2023, bringing Wayne County's average wage to \$67,000 in inflation-adjusted 2020 dollars. That level would be about 6 percent higher than in 2019.

Our relatively sunny outlook for real wages masks differing fortunes for Wayne's industry groups. Real wage growth is strongest in the lower-education services sector, totaling 11 percent from 2019 to 2023. We expect real wages in the higher-education services sector to grow by 6 percent, in line with the overall average. Real wages in the county's blue-collar industries, however, are forecast to languish, finishing 2023 about 2 percent lower than in 2019.

Unfortunately, the higher average wages at jobs in Wayne County relative to statewide do not translate into higher household incomes for county residents. From 2012 to 2019, the most recent available data, average household incomes adjusted for cost of living and household size have averaged nearly 20 percent higher in Michigan than in Wayne County. In 2019, the gap was approximately \$17,500. There was a large geographical divide between household incomes in the city of Detroit, where they averaged \$59,400, and in the rest of the county, where they averaged \$101,000, close to the state average. The area containing Canton and Plymouth Township had the county's highest adjusted household income, \$148,000 in 2019.

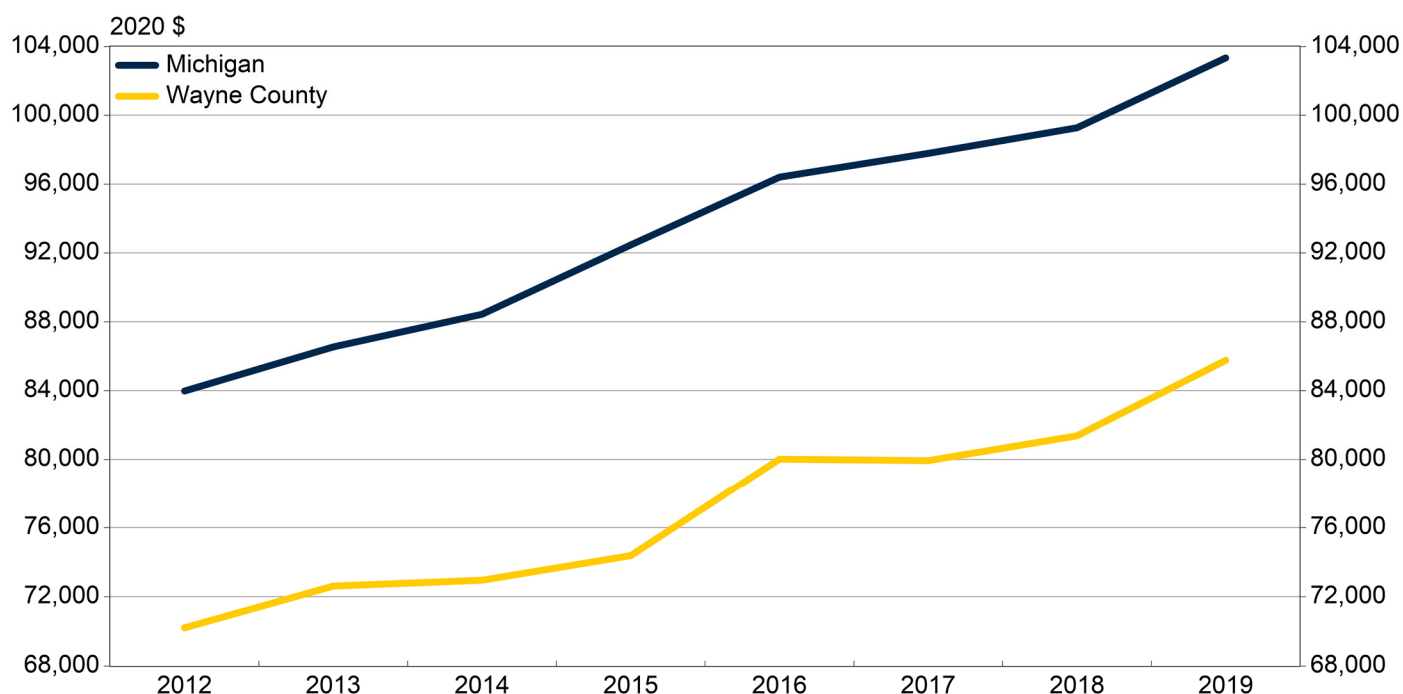
There are also large economic disparities between racial and ethnic groups in Wayne County. Black and Hispanic residents are less than half as likely as non-Hispanic White residents to live in households we classify as higher-income, and they are nearly twice as likely to live in households we classify as lower-income. That said, the racial and ethnic disparities we document in Wayne County are roughly in line with state trends. Our view, based on the historical experience, is that a strong economy and tight labor market tend to reduce economic disparities by boosting the prospects of lower-income workers. We hope that the economic recovery we are forecasting for Wayne County will lead to more broadly shared prosperity in the county over the years ahead. One challenge that we expect to confront

county leaders is that the employment recovery in lower-paid industries is likely to take much longer than in higher-paid industries.

In conclusion, we expect employment in Wayne County to outpace statewide growth slightly over the next few years. That would be a welcome change from the pattern over the past generation. To sustain its growth over the longer term, the county will need to grow its working-age population. Demographics will make doing so a challenge, but one promising source of population gains is international migration.

Figure 1

Average Adjusted Three-Person Equivalent Household Income, MI and Wayne

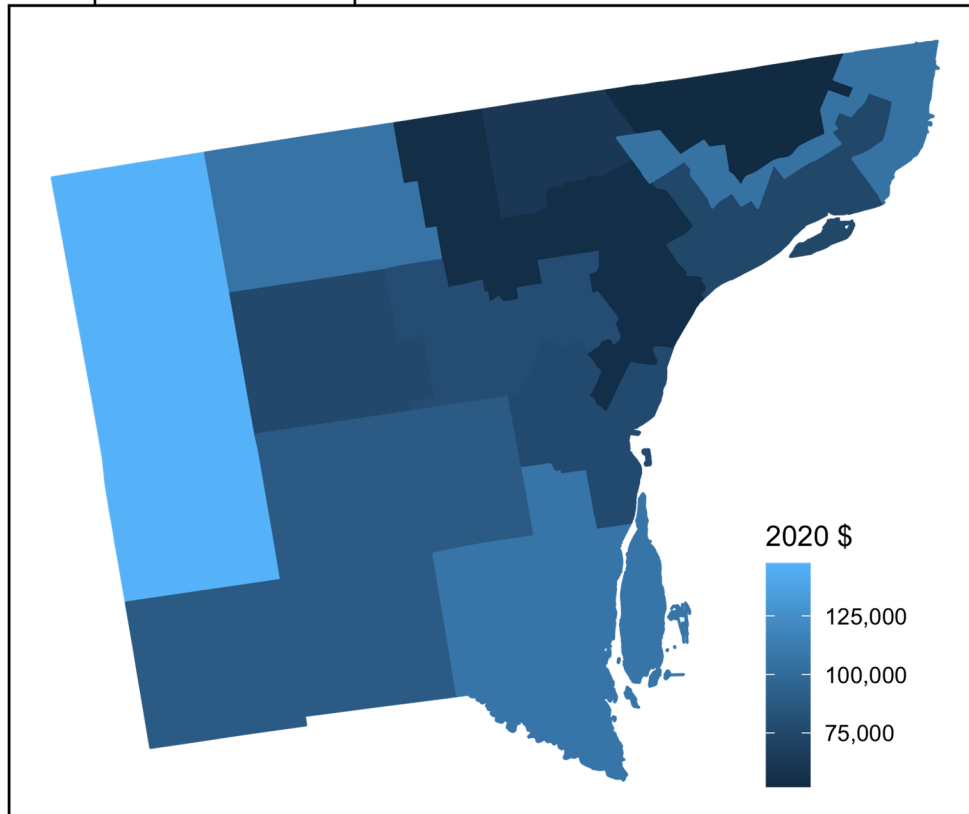


- To put our forecast in context, we examined the extent to which the pre-pandemic economy in Wayne County generated broadly shared prosperity. We compared Wayne County's economy to Michigan's and explored the geographical and demographic distribution of prosperity within the county.
- Figure 1 shows average adjusted household incomes in Wayne County and Michigan in the years 2012–2019. The recovery from the Great Recession was a period of strong income growth in both geographies.
- Average adjusted incomes grew by about one-quarter from 2012 to 2019 in both the county and the state. They rose from \$70,000 to \$86,000 in Wayne County and from \$84,000 to \$103,000 in Michigan.
- Average adjusted household incomes in Wayne County have historically trailed average adjusted incomes statewide by roughly 18 percent. In 2019, the average income in Michigan was \$17,500 greater than in Wayne County.
- Considerable variability by geography and demographic groups lies beneath those average levels.
- The income figures have been adjusted for household size, local cost of living, and inflation to be expressed in terms of three-person households and 2020 dollars. The adjustments are very similar to those described in our report for the Southeast Michigan Council of Governments, [Evaluating Shared Prosperity in Southeast Michigan, 2012–2018](#), with minor modifications.

Figure 2

Average Adjusted Three-Person Equivalent Household Income, Wayne PUMAs

Three-person household equivalent income



- Figure 2 shows the average adjusted three-person household income for Wayne County's 13 Public Use Microdata Areas (PUMAs) designated by the U.S. Census Bureau. The PUMAs shaded in a lighter blue indicate higher average incomes. Appendix A at the end of this booklet contains a detailed map of Wayne County's PUMAs.
- The Northwest PUMA containing Canton and Plymouth Township is the county's most affluent, with an average adjusted income of \$148,000 in 2019. The next most affluent PUMAs in 2019 were Southeast—Downriver South (\$108,000), North Central—Livonia City (\$107,000), and Northeast I-94 Corridor (\$106,000).
- In contrast, the county's least prosperous PUMA, Northeast Detroit, had an average income of only \$52,000 in 2019. The five PUMA regions that make up almost all of the city of Detroit had the lowest average adjusted incomes in the county in 2019.
- Overall, the average annual income in the city of Detroit was \$59,400. The average income for the rest of Wayne County, \$101,000, was similar to the statewide average.
- Encouragingly, incomes in the city of Detroit were starting to narrow the gap with the rest of Wayne County prior to the pandemic.
- Between 2012 and 2019, four of Wayne County's five PUMA regions with the fastest adjusted income growth were located in Detroit.
- Average adjusted household income grew at an average rate of 5.1 percent per year in Detroit, roughly twice as fast as the rate of 2.5 percent in the rest of the county.
- Appendix B at the end of this booklet provides complete data on the average income and income growth rate in the period 2012–2019 for each PUMA in Wayne County, as well as aggregated data for the five PUMAs that make up the city of Detroit.

Table 1

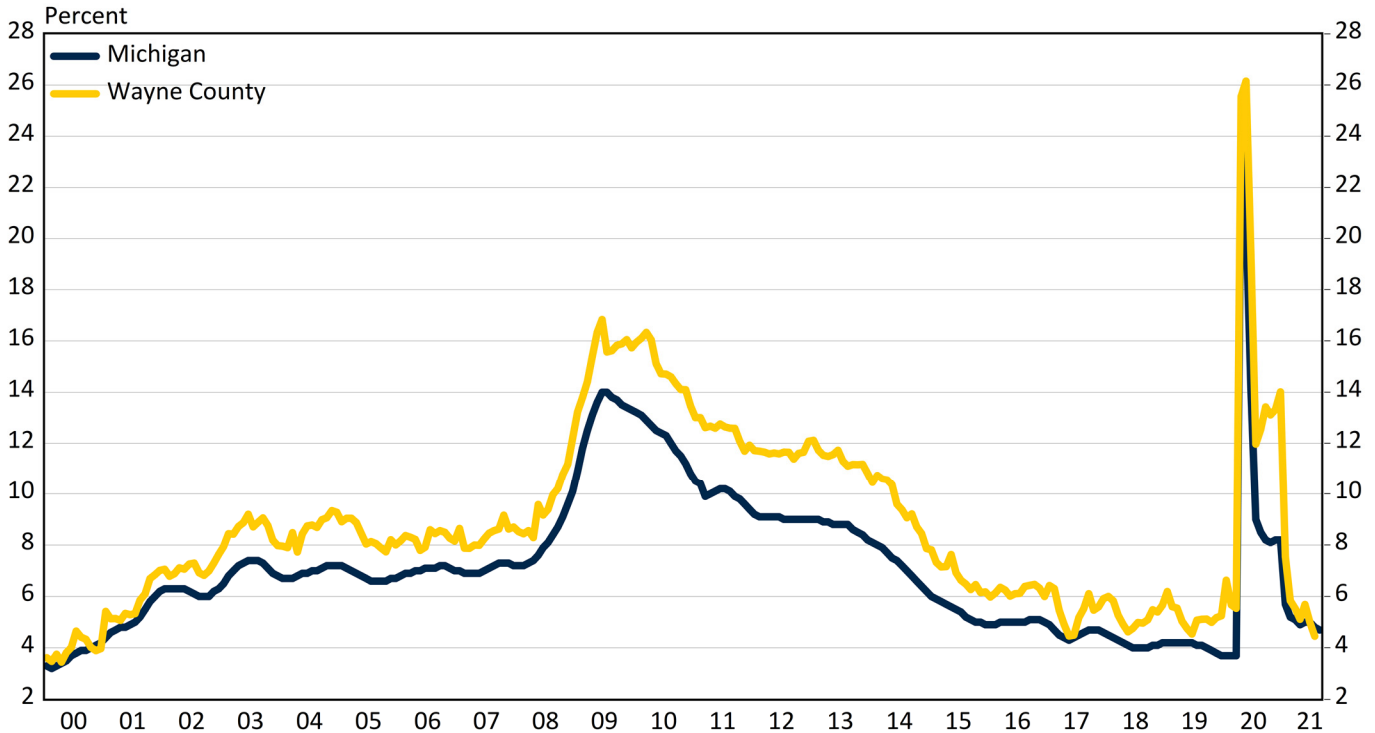
Population in Lower-, Middle-, and Upper-Income Households, MI and Wayne

	<u>Lower-Income Population</u>	<u>Middle-Income Population</u>	<u>Upper-Income Population</u>
Michigan			
All Race/Ethnicity	28%	53%	18%
Hispanic	41%	46%	13%
Non-Hispanic Asian	21%	50%	28%
Non-Hispanic Black	48%	42%	10%
Non-Hispanic White	24%	57%	20%
Wayne County			
All Race/Ethnicity	40%	47%	13%
Hispanic	50%	43%	7%
Non-Hispanic Asian	30%	45%	25%
Non-Hispanic Black	54%	39%	7%
Non-Hispanic White	28%	54%	18%

- Table 1 shows the shares of Michigan and Wayne County residents we classify as living in lower-, middle-, and upper-income households.
- We define the threshold between lower- and middle-income households to be two-thirds the median three-person equivalent household income in the United States, adjusted for local cost of living and household size. We define the threshold between middle- and upper-income households to be twice the adjusted national median income.
- In areas where the cost of living is equal to the national average, we classify a three-person household as middle income if it had an adjusted household income between \$52,300 and \$157,000 in 2019. Those values are 7.7 percent lower in Michigan and 4.7 percent lower in Wayne County, reflecting the lower relative cost of living in Michigan and the Detroit MSA than in the nation overall.
- A higher share of Wayne County residents live in lower-income households than statewide. Across all races and ethnicities, 40 percent of Wayne County residents live in lower-income households, compared to 28 percent of Michigan residents.
- Within Wayne County, there are large economic disparities between residents of different races. The share of Black residents living in lower-income households (54 percent) is nearly twice as high as the share of White residents (28 percent). The share of Hispanic residents in lower-income households (50 percent) is nearly as high as the share of Black residents.
- Racial disparities also exist in the shares of residents living in upper-income households. While only 7 percent of Hispanic and non-Hispanic Black residents of Wayne County live in upper-income households, 18 percent of non-Hispanic White and 25 percent of non-Hispanic Asian residents do so.
- Similar racial disparities exist statewide. In both Wayne County and Michigan, there is a 15 percentage point gap between the shares of non-Hispanic Black and White residents living in middle-income households. The gap between Hispanic and non-Hispanic White residents living in middle-income households is 11 percentage points both in Michigan and in Wayne.
- Thus, although Wayne County's racial and ethnic disparities in household incomes are a major challenge, this is a statewide problem, rather than unique to the county.

Figure 3

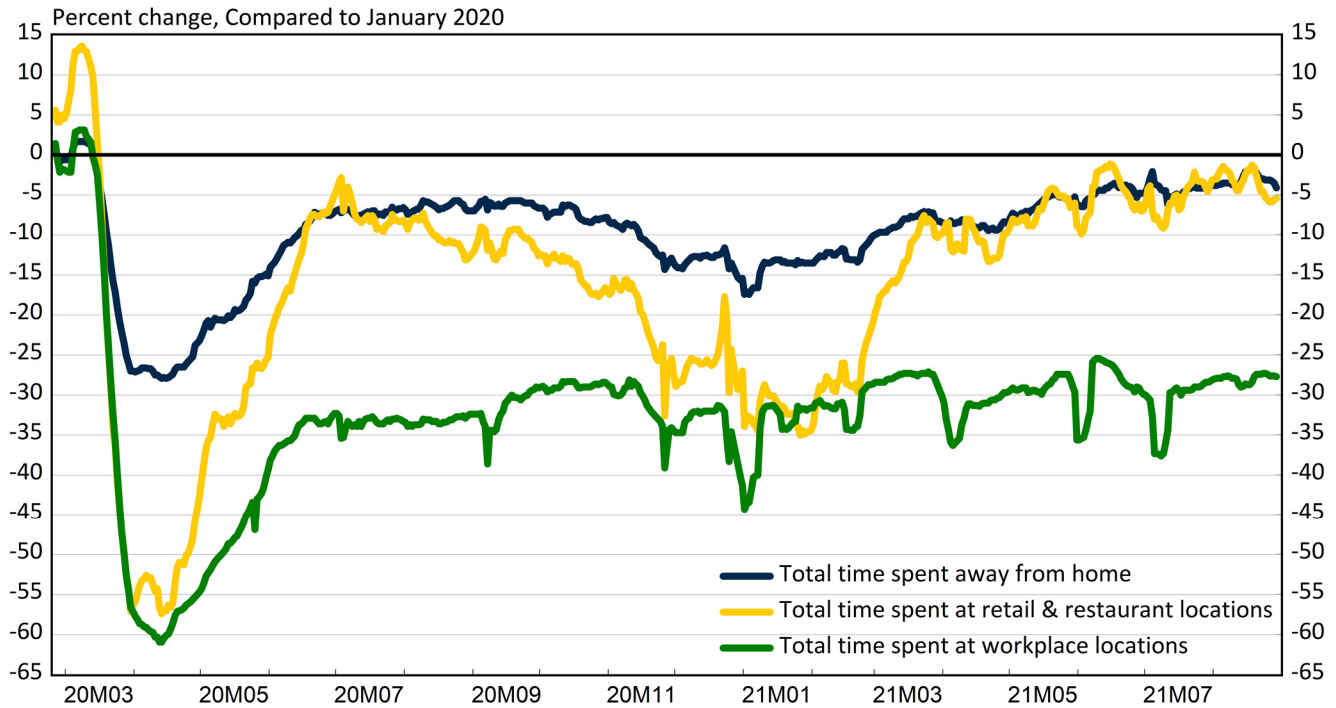
Seasonally Adjusted Unemployment Rate in Michigan and Wayne County



- Figure 3 shows the seasonally adjusted unemployment rate in Michigan and in Wayne County. Wayne's unemployment rate averaged approximately 5.5 percent prior the pandemic. It skyrocketed to 26 percent in April and May 2020 at the start of the COVID-19 pandemic.
- By the end of spring 2021, the unemployment rate in Wayne County had returned to roughly pre-pandemic levels, registering 5.7 percent in May. Wayne's unemployment rate has continued to decline since then, reaching 4.5 percent in July 2021, its lowest reading since August 2000.
- The pandemic has been a very difficult time for government statisticians to gather the data that determines the local area unemployment estimates. Although there is no doubt that the unemployment rate in the county is now much lower than it was at the start of the pandemic, we worry that the estimated unemployment rate currently understates the extent of slack in the county's labor market.
- As of July 2021, the county's labor force and household employment count remained 4.1 and 2.9 percent, respectively, below their pre-pandemic levels, highlighting the remaining ground that the labor market has yet to recover.
- We believe that many residents who are currently out of the labor force will return this fall and winter as the economy continues to normalize. We expect this process to take time, however, as the Delta wave of the pandemic heads north.
- Unfortunately, the future course of the COVID-19 pandemic remains a major risk to our forecast. We are cautiously optimistic that the availability of booster shots, an uptick in vaccination rates, and what we hope will be the relatively short duration of the Delta wave will all limit the pandemic's future toll on the local community.

Figure 4

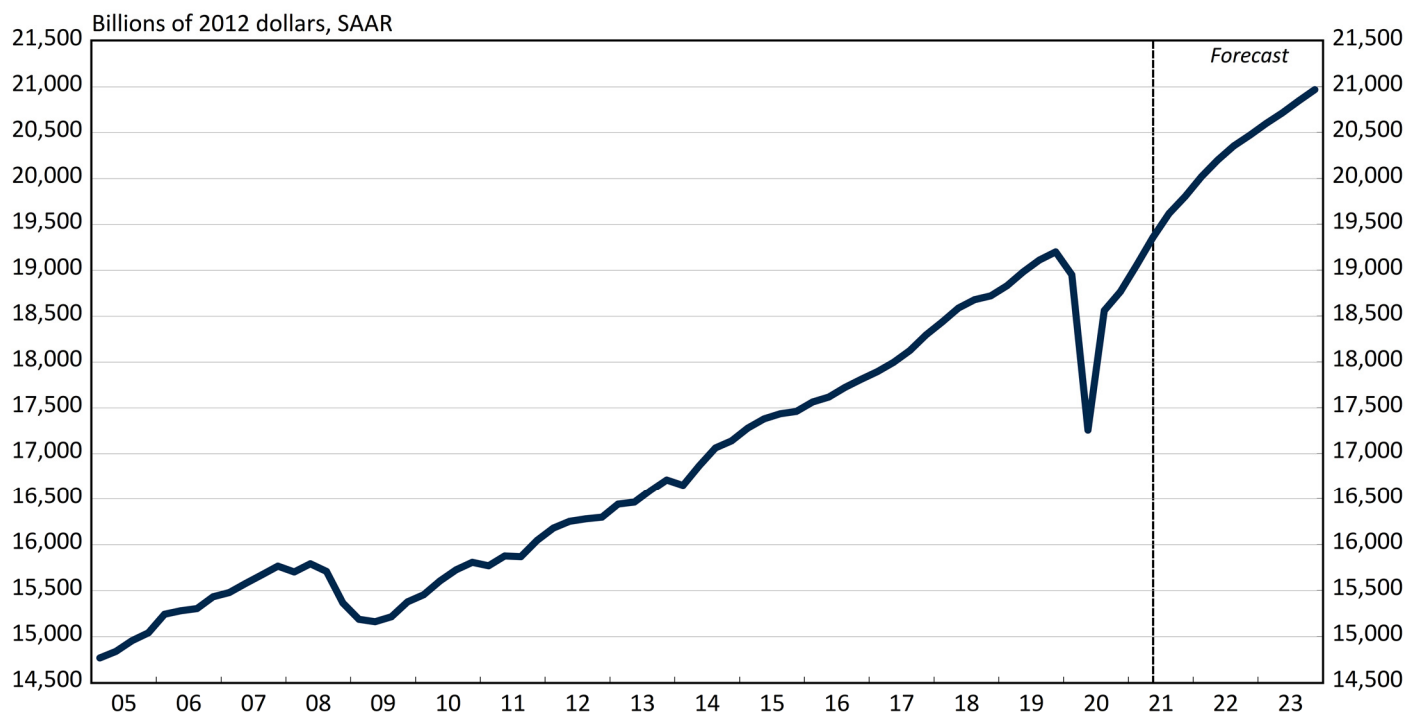
Total Time Spent at Various Locations in Wayne County



Source: Google's COVID-19 Community Mobility Reports via Opportunity Insights

- Figure 4 shows the amount of time spent at various locations in Wayne County, as measured by Google's COVID-19 Community Mobility Report, provided via Opportunity Insights.
- Total time spent away from the home tumbled by more than one-quarter at the beginning of the pandemic. Time spent both at workplace locations and at stores and restaurants declined even more abruptly, by 55–60 percent.
- Time spent at retail and restaurant locations in Wayne County rebounded sharply in spring 2021 and by the summer was running only about 5 percent lower than in January 2020. We believe that consumers will continue to return to these establishments as long as the public health situation allows them to do so.
- Time spent at workplace locations has not recovered much since its initial partial recovery in summer 2020. Since then, it has averaged 25–30 percent below its pre-pandemic level.
- Surveys have indicated that many companies will adopt hybrid work schedules moving forward, with workers being able to work from home some days per week. We expect time spent at workplace locations to keep inching up as establishment employment continues to rebound, but it may never return to pre-pandemic levels.
- Each successive wave of COVID-19 in the state has generated a smaller impact on time spent away from home. Total time spent away from home decreased by almost 30 percent from January to March 2020, during the initial phase of the pandemic. In contrast, total time spent away from home averaged roughly 15 percent below January 2020 levels during the second wave in the late fall and winter. Since then, time spent away from home has generally continued to inch back toward the January 2020 baseline.
- Despite the recent rise of the Delta variant, total time spent away from home in Wayne County has remained only about 5 percent below pre-pandemic levels for the past few months.

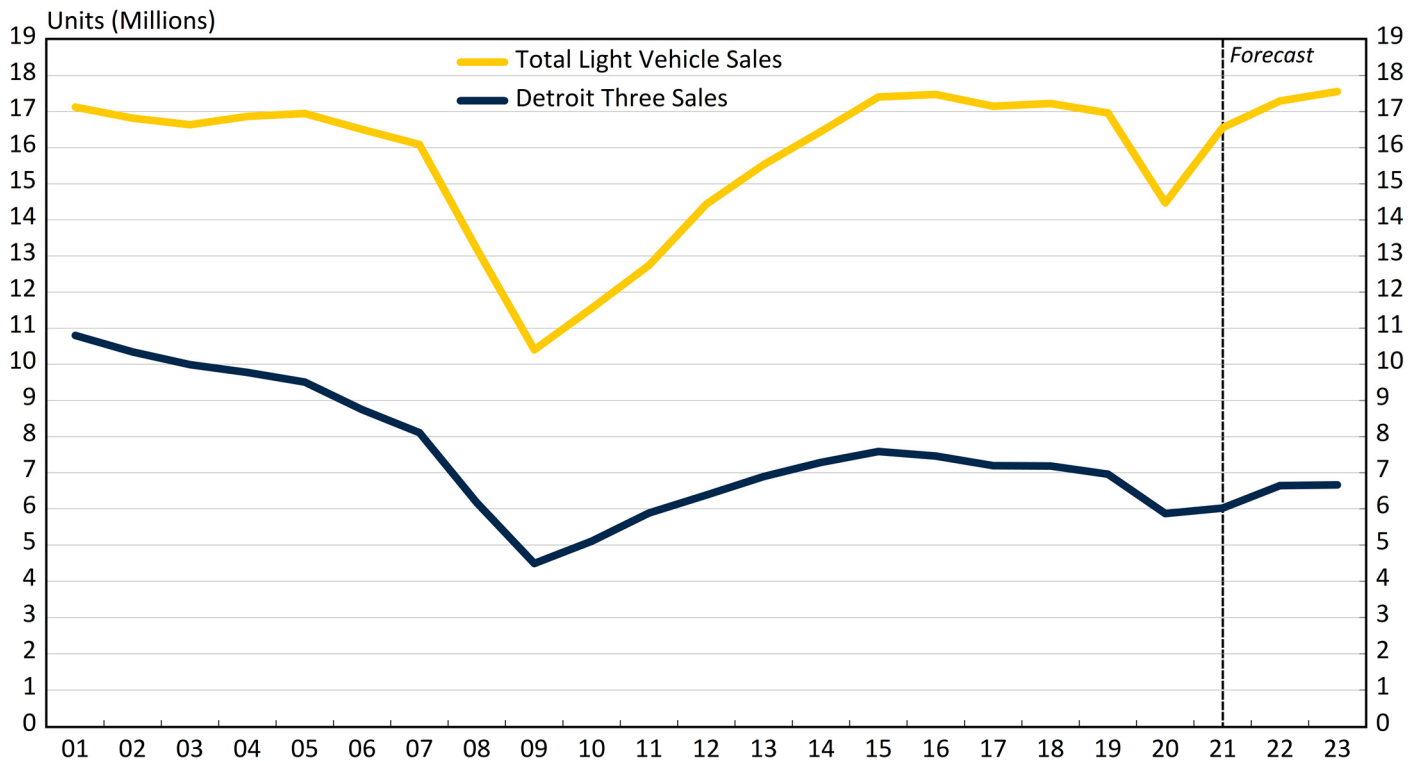
Figure 5
U.S. Real GDP



- Wayne County's economy and prospects are situated in the context of the national economy.
- Figure 5 shows U.S. real GDP as measured in billions of 2012 dollars. Real GDP grew briskly in the first half of 2021, rising 6.3 percent at an annual rate in the first quarter and another 6.5 percent in second quarter. The level of real GDP is now higher than it was prior to the pandemic.
- We expect the pace of growth to dip to an annual pace of 5.5 percent in the third quarter amid rising cases of COVID-19. Growth slips further in the fourth quarter, to an annualized 3.9 percent, as the Delta wave continues its spread from the southern United States to the northern regions of the country.
- We project real GDP growth to rebound to an annual pace of 4.4 percent in the first quarter of 2022, as some of the economic activity deferred by the Delta wave of the pandemic returns.
- We expect any future waves of the pandemic to have successively less economic impact than the Delta wave.
- Over the longer run, we expect that real GDP growth will continue to cool down. It reaches a 2.4 percent annualized pace by the fourth quarter of 2023.
- On an annual basis, we anticipate that output will grow by 5.8 percent in 2021, 4.1 percent in 2022, and 2.6 percent in 2023.
- We have penciled in the passage of a slimmed down version of the Biden Administration's proposed fiscal agenda. In contrast to much of the pandemic-era relief programs, much of this new spending will be spread over the next 10 years, meaning its near-term impact on growth will be smaller than the headline numbers might suggest.

Figure 6

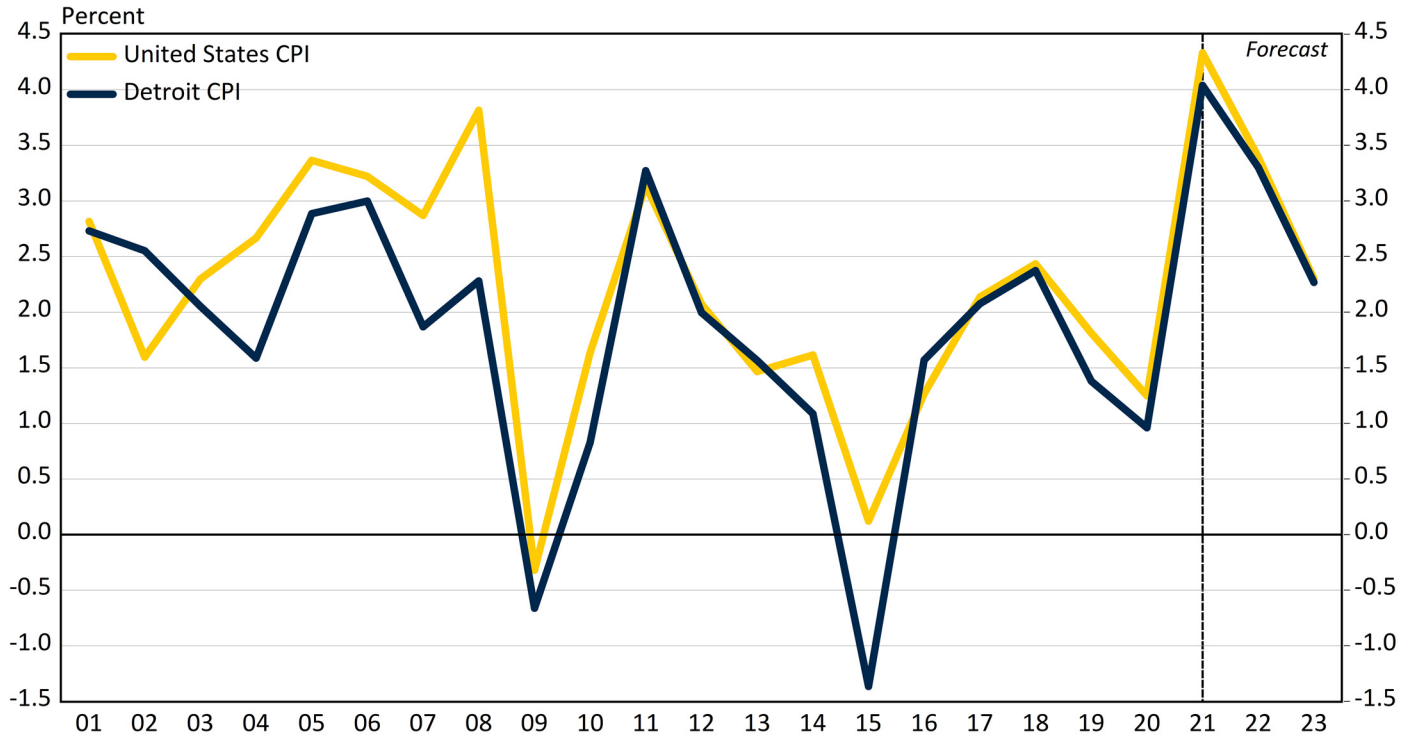
Total and Detroit Three Light Vehicle Sales



- After hovering in the 17.0–17.5 million units per year range from 2015 through 2019, total national light vehicle sales tumbled to 14.5 million units in 2020. Detroit Three sales, which had been running near or above 7 million per year since 2013, fell to 5.9 million units last year.
- The lost sales were concentrated in the initial stages of the pandemic, though, and sales rebounded nicely in the later part of the year.
- Low interest rates and continued federal income support drove strong vehicle demand in the first half of 2021, with sales rising to a 16.9 million unit annual pace in the second quarter of 2021.
- The microchip shortage that has been plaguing the auto industry began to bite more acutely as the second quarter progressed. The annualized sales pace fell from 18.3 million units in April to 13 million units in August amid production shortfalls and low inventory levels.
- As a result of the persistent chip shortage, we expect domestic production to remain constrained for the rest of 2021, limiting inventories and sales. We expect national light vehicle sales to total 16.6 million units this year, and Detroit Three sales to total 6.0 million.
- As supply starts to catch up with demand, we forecast national light vehicle sales to reach 17.3 million units in 2022 and a record-high 17.6 million units in 2023. We project that Detroit Three sales will climb to 6.6 million units in 2022 and 6.7 million units in 2023.
- One silver lining of the frustrating production shortfalls this year is that inventory rebuilding will be a prolonged process after the semiconductor shortage begins to ease. That should provide a boost to labor demand in the transportation equipment manufacturing sector for much of our forecast period.

Figure 7

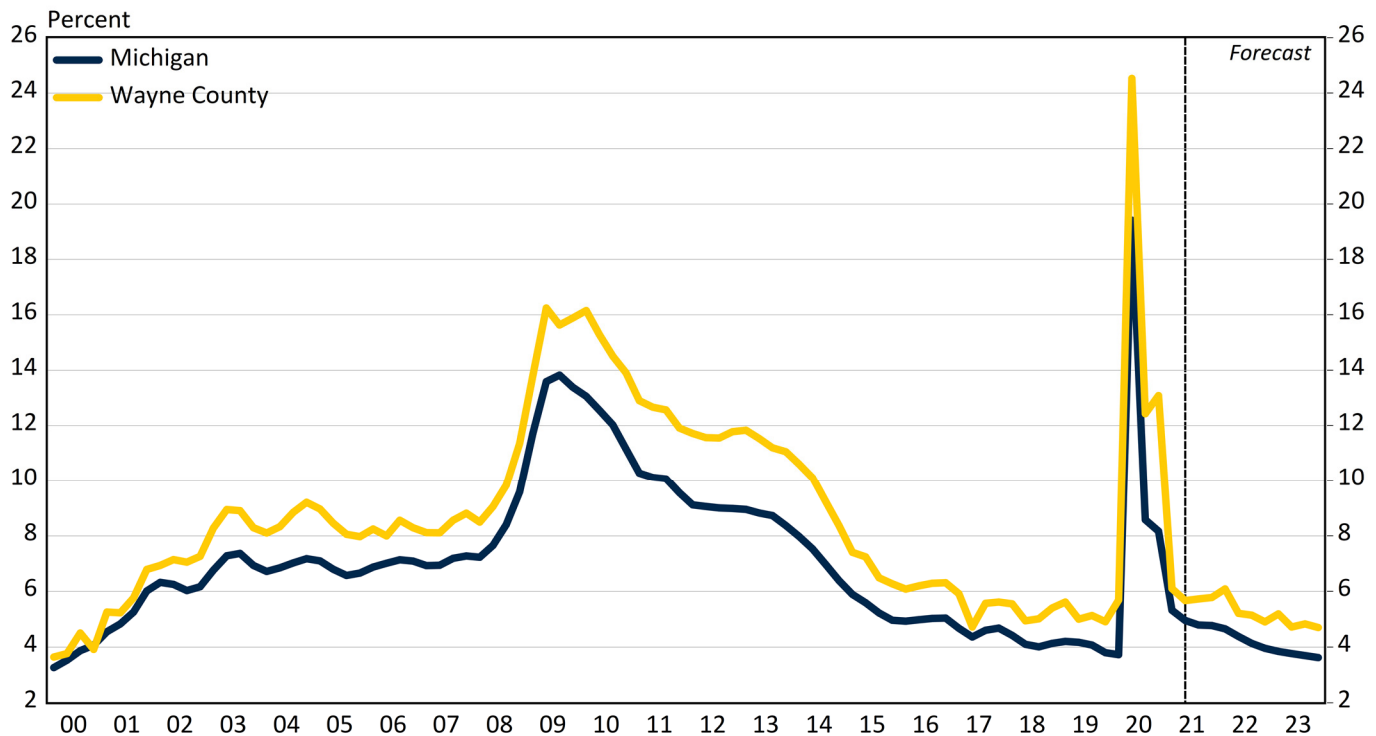
Inflation Rate, National and Detroit CPI



- Figure 7 shows annual price inflation, as measured by the all-item Consumer Price Index (CPI), nationally and for the Detroit metro area.
- Inflation has picked up sharply in recent months. All-item national CPI inflation rose from a 2.4 percent annual pace in the fourth quarter of 2020 to 8.4 percent in the second quarter of 2021. The acceleration in local inflation has been even sharper, with Detroit CPI inflation registering an 8.8 percent annual pace in the second quarter.
- Typically, such sharp movements in inflation stem from rising commodity prices. Economists thus often focus on core CPI inflation, which strips out volatile food and energy prices. In this episode, though, core CPI inflation has nearly kept pace with headline inflation, rising to an annualized 8.1 percent in the second quarter.
- Despite the historically higher persistence of core inflation, we believe that the present moment of high inflation will prove to be mostly transitory.
- Much of the inflation can be traced to specific portions of the economy, such as vehicles, that have been adversely impacted by the pandemic. We believe that as supply chain bottlenecks begin to dissipate, inflation will start to moderate as well, hopefully starting late this year.
- We project national inflation to average 4.3 percent in calendar year 2021. Local inflation comes in a bit lower, at 4.0 percent. Still, the local inflation rate we are projecting for this year would be the fastest since 1990.
- Inflation moderates to 3.4 percent nationally and 3.3 percent locally next year as the pandemic subsides and supply chains heal. National and local inflation both register 2.3 percent in 2023 as the economy continues to normalize.
- Nonetheless, we expect inflation to run a bit higher over the medium run than it did in the recovery and expansion following the Great Recession, which was a period of unusually low inflation.

Figure 8

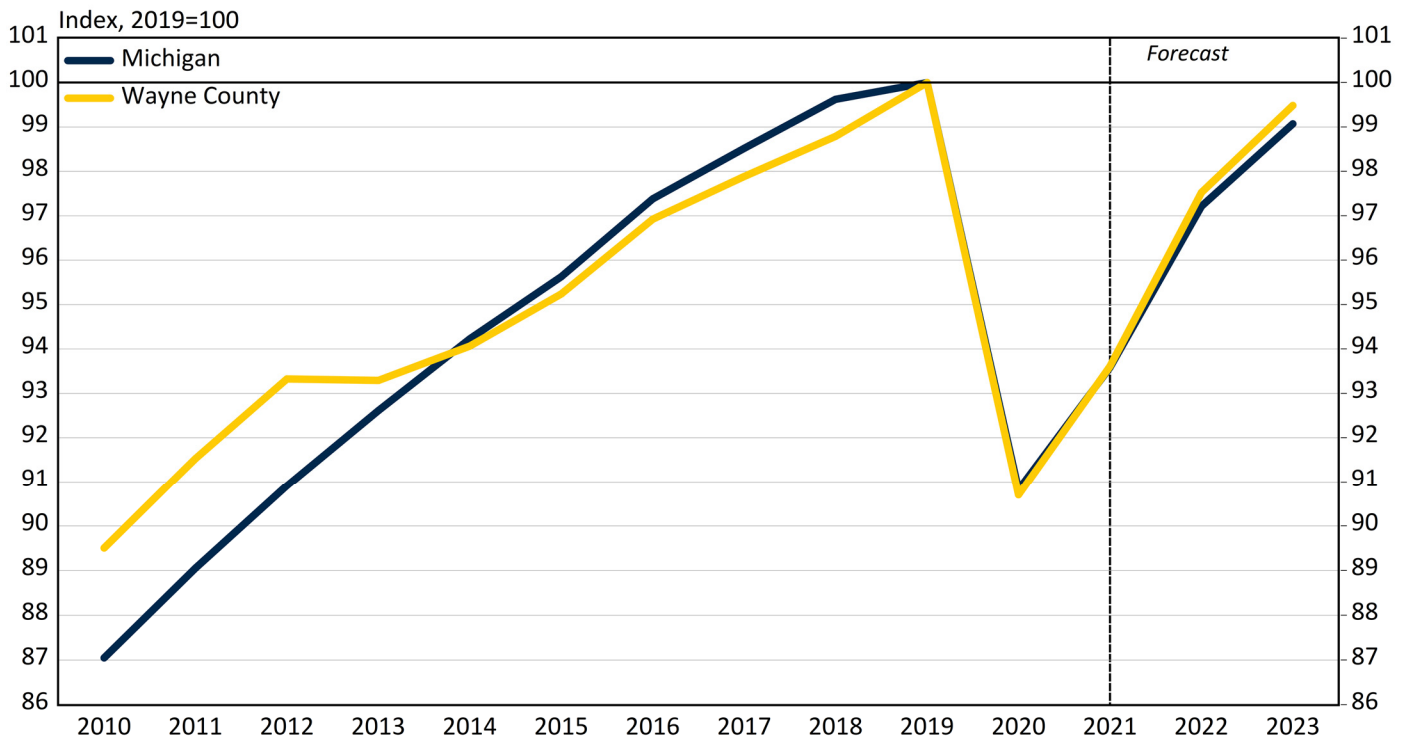
Quarterly Unemployment Rate, Michigan and Wayne County



- Figure 8 shows history and our forecast of seasonally adjusted unemployment rates, on a quarterly basis, in Michigan and Wayne County.
- Wayne County's unemployment rate averaged 24.8 percent in the second quarter of 2020 and 14.0 percent for the year. Although Wayne's unemployment rate in the second quarter of last year was unprecedented, on an annual average basis, the county's unemployment rate was higher in 2009 and 2010 than in 2020.
- The unemployment rate both in Wayne County and statewide has recovered much more quickly from the pandemic recession than it did following the Great Recession. As noted previously, we believe that the local unemployment rate currently understates the full extent of slack in the labor market. Still, the county's measured unemployment rate of 5.7 percent in the second quarter is welcome and encouraging news.
- We expect the unemployment rates in both the state and county to hover around their current levels for the rest of 2021, as the rebound in the labor force offsets the job gains we are forecasting.
- We project Wayne County's unemployment rate to average 5.8 percent this year and Michigan's unemployment rate to average 5.0 percent.
- We forecast the county's unemployment rate to decline to 5.3 percent in 2022 and 4.9 percent in 2023. The state's jobless rate declines to 4.3 percent next year and 3.7 percent in 2023.
- The unemployment rates we are forecasting in 2023 would be the lowest since the year 2000 both in Wayne County and in Michigan.
- In 2019, we warned that Michigan faced a future of persistent labor shortages in light of its aging labor force and slow population growth. This challenge will become even more acute over the next decade.
- Wayne County has become increasingly dependent on international immigration to sustain its labor force. The county's native-born population aged 25–64 declined by over 6 percent over the past decade.
- Labor shortages will put a speed limit on the attainable pace of economic growth if those trends do not change.

Figure 9

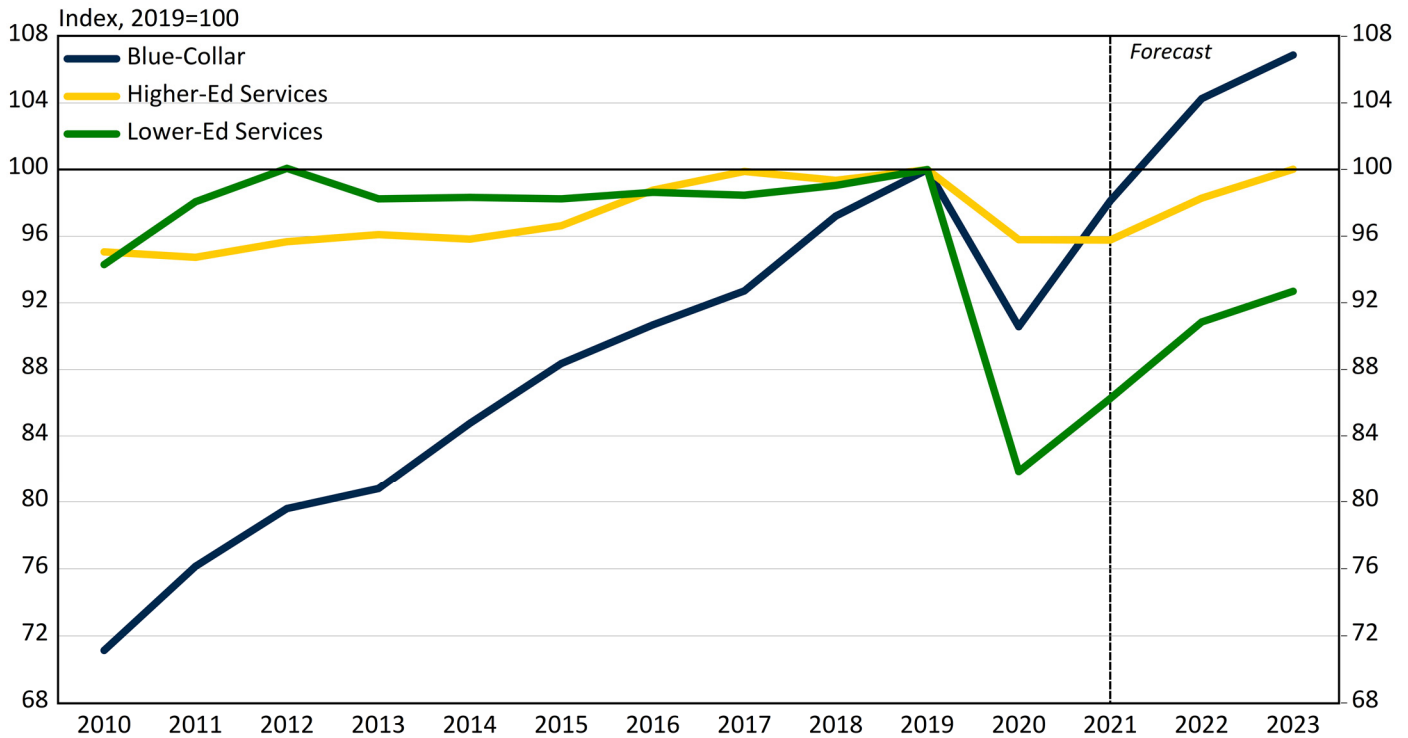
Payroll Employment Indices for Michigan and Wayne County



- Figure 9 shows history and our forecast for payroll employment in the state of Michigan and Wayne County. The series in the graph are indexed so that each series' level in 2019 is equal to 100.
- Payroll employment fell by roughly the same proportion in 2020 in the state and county, by 9.2 percent and 9.3 percent, respectively.
- We project a strong rebound in payroll employment both in Wayne County and statewide this year, but we believe the county will grow slightly more rapidly than the state. We forecast that the county's payroll jobs count will climb by 3.2 percent this year, outpacing the state's growth pace by 0.2 percentage points.
- The relatively rapid recovery that we project is driven by several factors, including the end of pandemic restrictions on the service economy; large-scale federal income support; rising personal comfort levels with resuming economic activities; the reopening of schools for full-time in-person instruction this fall; and our expectation that the city of Detroit will resume its promising trajectory from prior to the pandemic.
- We expect the Delta wave of the COVID-19 pandemic to defer some economic growth from the second half of 2021 into 2022. Our hope is that the Delta wave's economic impact will be smaller than previous waves', however.
- On a calendar-year basis, we expect employment growth in 2022 to be slightly faster than in 2021, in both the state and the county. The payroll jobs count in Wayne County grows by 4.2 percent next year.
- Job growth then decelerates to 2.0 percent in 2023 in Wayne County and 1.9 percent statewide as the economy approaches a new normal.
- Our forecast implies that employment in Wayne County in 2023 will average only 0.5 percent below 2019 levels. We consider that performance to be a nearly complete recovery.

Figure 10

Employment Indices in Wayne County by Selected Industries



- Figure 10 divides Wayne County's industries into the three categories. The first category comprises traditional blue-collar industries; the second comprises service-providing industries that tend to employ workers with college degrees, which we call higher-education service industries; and the third category comprises service-providing industries that tend to employ workers without college degrees, which we call lower-education service industries.
- The graph shows recent history and our forecast of employment in each of the three groups, indexed so that the level in 2019 is equal to 100.
- Employment in Wayne County's **blue-collar industries** was growing steadily prior to the COVID-19 pandemic. Payroll jobs in these industries declined by 9.4 percent in 2020, but we expect that they will recover 80 percent of the lost jobs this year. We are forecasting further job gains in 2022 and 2023, which will push Wayne County's blue-collar job count to 6.9 percent above 2019 levels in 2023.
- Employment in Wayne's **higher-education service industries** declined by a comparatively mild 4.2 percent in 2020, because these industries were better able to accommodate working from home.
- Our forecast of a relatively weak recovery for the higher-education services industries in 2021 stems partly from an unusual loss of jobs in management of companies and enterprises during the first quarter of the year. Excluding management of companies and enterprises, we are forecasting job growth of 1.2 percent in these industries, still a restrained pace. We project a return to growth in the next two years of our forecast, so that employment in these industries recovers to its 2019 level by 2023.
- The impact of the 2020 pandemic recession has been the most severe for Wayne County's **lower-education service industries**. The pandemic wiped out roughly one out of every five jobs in lower-education services in 2020.
- We are the least optimistic about what the future holds for the lower-education service industries. We anticipate that this year they will recover only one-quarter of the jobs they lost in 2020. We are forecasting that these industries will recover another quarter of their losses in 2022 before the recovery slows in 2023. We project that only 60 percent of the jobs lost in these industries will be recovered by 2023.
- On the next page, Table 2 splits out our forecast for Wayne County's labor market recovery by major industry divisions.

Table 2

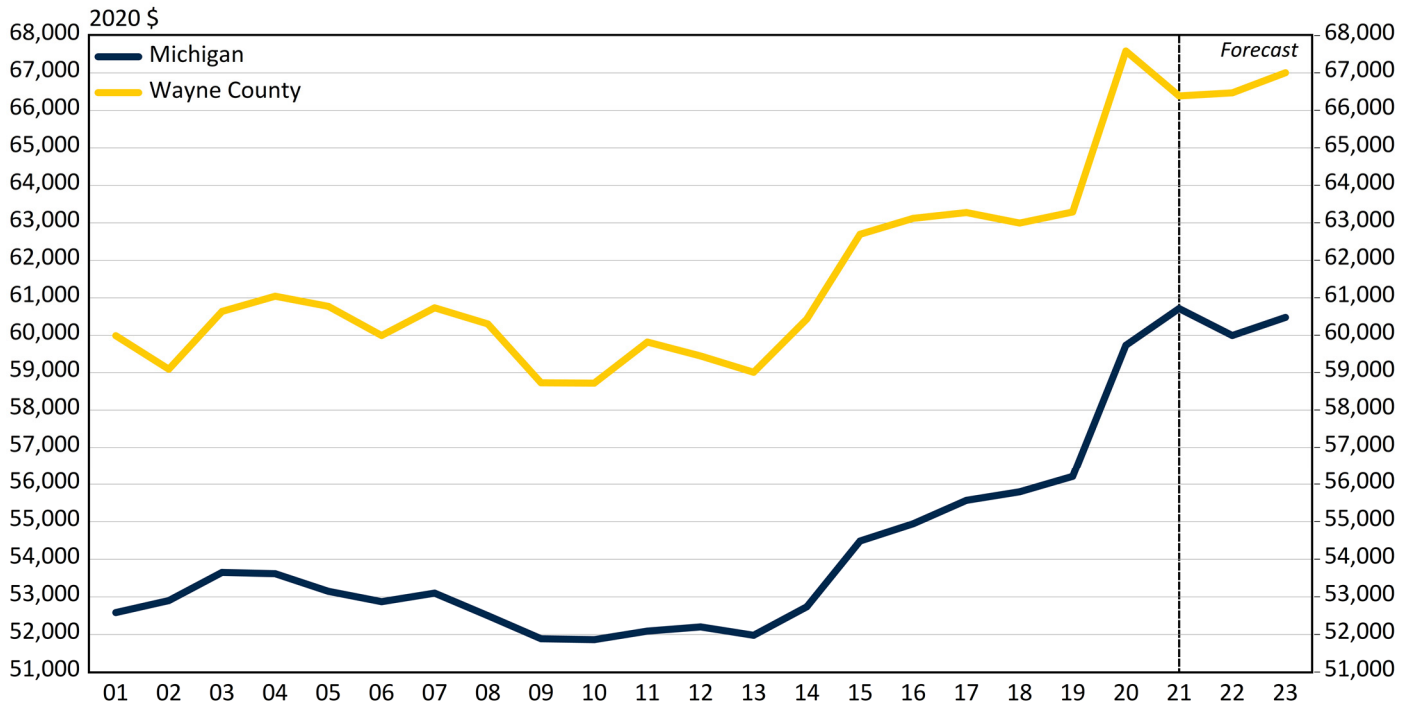
Forecast of Jobs in Wayne County by Major Industry Division, 2021–2023

	2019	2020	Forecast Employment			Average Annual Wage
			2021	2022	2023	2019 \$
Total Jobs (Number of jobs)	734,176	665,889	687,238	715,999	730,407	62,554
(Annual percentage change)	(1.2)	(-9.3)	(3.2)	(4.2)	(2.0)	
Total Government	83,196	79,510	79,265	81,593	82,123	61,596
Total Private	650,980	586,378	607,973	634,405	648,283	62,677
Full-Recovery Industries						
Utilities	3,574	3,567	3,566	3,704	3,843	124,572
Professional, scientific, and technical services	55,597	53,507	54,686	56,171	57,319	100,378
Finance and insurance	28,803	30,733	33,019	33,864	34,586	89,581
Transportation equipment (Motor Vehicles & Parts) manufacturing	49,340	40,172	48,815	53,080	54,713	79,527
Construction	21,253	19,265	20,735	22,081	22,748	70,582
Transportation and warehousing	48,560	49,924	50,813	53,579	55,025	61,004
Incomplete-Recovery Industries						
Accommodation and food services	66,894	46,336	48,951	55,701	58,496	22,804
Retail trade	67,726	62,167	65,406	65,332	65,198	32,149
Other services	22,242	18,369	18,794	19,448	19,874	37,052
Administrative support and waste management	40,023	35,852	38,535	39,715	39,867	42,860
Private education	11,140	10,043	10,258	10,471	10,664	43,150
Real estate and rental and leasing	7,946	7,091	6,999	7,137	7,193	54,575
Private health and social services	115,704	107,906	108,715	111,339	113,600	55,977
Arts, entertainment and recreation	10,209	6,811	6,939	7,958	8,529	66,680
Natural resources and mining	1,022	988	1,029	1,026	1,021	67,726
Other manufacturing	43,577	37,962	39,274	40,961	41,517	74,175
Information	5,642	5,793	5,671	5,642	5,591	79,881
Wholesale trade	26,323	24,119	23,943	24,759	25,092	80,226
Management of companies and enterprises	24,363	24,875	20,784	21,399	22,367	147,470
Unclassified	1,038	944	1,038	1,038	1,038	36,133
Addendum						
Unemployment Rate	5.2	14.0	5.8	5.3	4.9	

- In Table 2, we divide Wayne County's major private sector industry groups into two types of industries—those that fully return to 2019 employment levels by 2023 and those that only partially regain 2019 employment levels. Appendix C displays a full list of roughly 100 industries, organized by NAICS codes.
- The **utilities** industry pays very well, but it is relatively small. We do not expect this industry to gain jobs this year, but it is expected to gain 140 jobs in each of 2022 and 2023.
- The **professional, scientific, and technical services** industry lost 2,100 jobs in 2020. We are expecting it to grow by an average of 1,270 jobs per year in 2021–23. That growth will put it 1,720 jobs above its 2019 level in 2023.
- **Finance and insurance** is one of three major industries that gained jobs in Wayne County in 2020. It gained 1,930 jobs in 2020, and we expect it to gain an additional 2,290 jobs this year. Growth continues at a slower pace throughout our forecast period, averaging 780 job gains per year in 2022 and 2023.
- Employment in **motor vehicle and parts manufacturing** fell by 9,170 jobs in 2020, but we expect this industry to recover 94 percent of those losses in 2021. We forecast nearly 5,900 additional job gains over the next two years, bringing employment 5,400 (11 percent) higher than the 2019 level by 2023. Our optimism owes largely to the opening of Stellantis' new Detroit Assembly Complex — Mack, General Motors' retooling of Factory Zero, and Magna's expansion of its plant in Highland Park.
- Wayne County's **construction** industry lost almost 2,000 jobs in 2020. We believe that it will recover those losses and more by 2022, with an average of 1,410 job gains per year this year and next. Job gains then slow to 670 jobs in 2023. A shortage of trained workers, however, may limit the job gains that we are forecasting in the construction industry.
- **Transportation and warehousing** is another major industry that gained jobs in 2020. Job gains totaled 1,360 last year, but we expect it to slow to 890 jobs in 2021. Growth then picks back up over the remainder of our forecast period, boosted by new projects such as Amazon's new facilities at the State Fairgrounds and Pinnacle Race Course. We project average growth of 2,110 jobs per year in 2022 and 2023.
- The **management of companies and enterprises** industry also gained jobs in 2020; it falls into the incomplete-recovery category of our forecast, however, because it unexpectedly lost 4,210 jobs (17 percent) in the first quarter of 2021. Consequently, we expect this industry to lose 4,090 jobs this year before recovering approximately 800 jobs in each of 2022 and 2023.
- Employment in the **accommodation and food services** industry, the lowest-paying industry in the county, was hit the hardest in the pandemic, losing 31 percent of its jobs in 2020. We expect accommodation and food services to recover slowly, with employment in 2023 remaining 12.6 percent, or 8,400 jobs, below its 2019 level.
- Employment in **retail trade**, another low-wage industry, fares a bit better than in accommodation and food services. We anticipate that this year, the retail trade industry will recover almost 60 percent of the jobs it lost in 2020. We are pessimistic about the longer-run employment trend in retail trade, though. We project the industry to lose a total of 210 jobs between 2022 and 2023. Employment in retail trade in 2023 will remain 3.7 percent below its 2019 level.
- The **arts, entertainment and recreation** industry has an unusually high average wage in Wayne County, 66,680 dollars as of 2019. That was almost twice the state's average for this industry. The average wage in Wayne County is higher because the county houses over 40 percent of the state's spectator sports industry, which includes professional athletes. However, these high wages do not boost our employment outlook for this industry, which we believe will only recover about half of its 2020 job losses by the end of our forecast period.
- Private **health and social services** account for just under one-fifth of all private payroll jobs in Wayne County. This industry lost 7,800 jobs in 2020 and is expected to only recover 10 percent of those losses this year. We anticipate job gains will increase to an average of 2,440 jobs per year in 2022 and 2023. However, those gains are not enough to push the industry's job count back to its pre-pandemic level. In 2023, employment in this industry is expected to remain 1.8 percent, or 2,100 jobs, below its 2019 level.

Figure 11

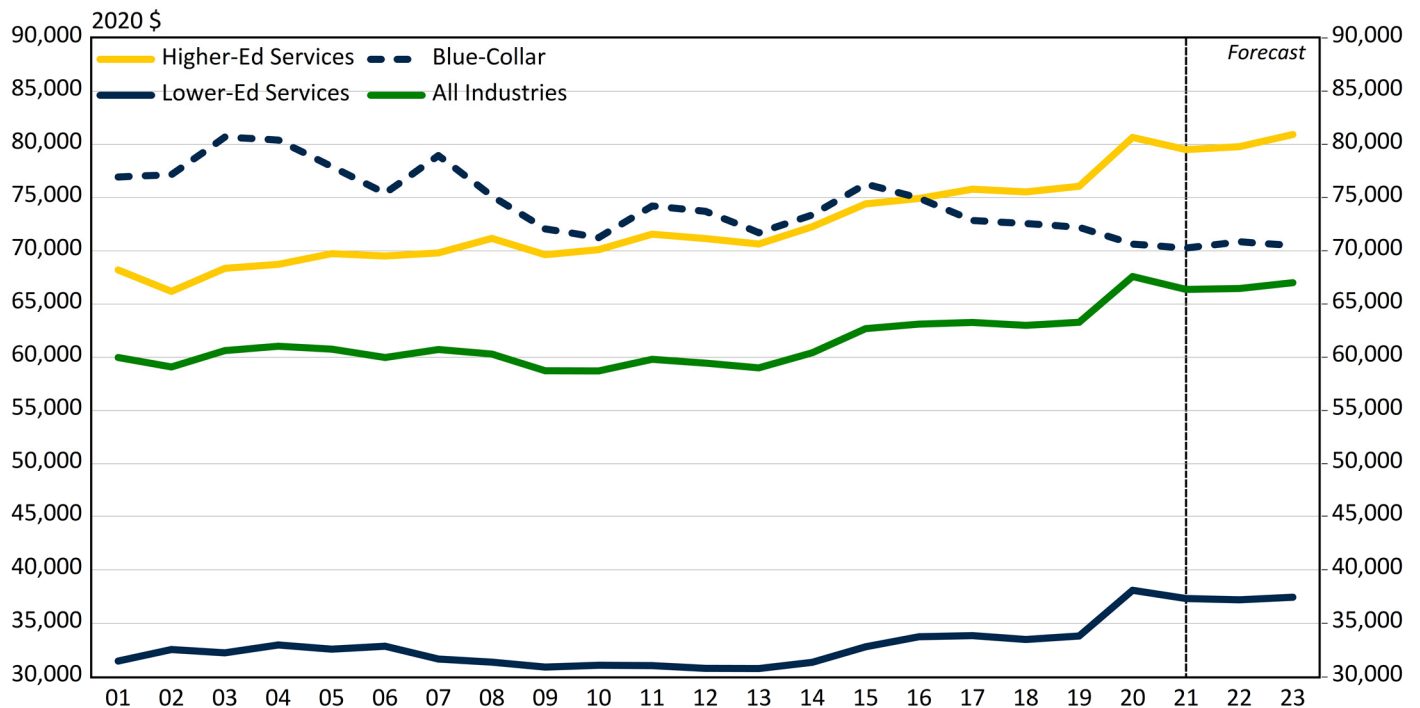
Average Real Wage in Michigan and Wayne County



- Figure 11 shows recent history and our forecast for average real wages in Michigan and Wayne County, adjusted for inflation to be expressed in 2020 dollars. The average real wage is measured on an establishment basis rather than a household one. Therefore, the figures for Wayne County apply to jobs located in the county, but not necessarily to county residents.
- Average real wages at Wayne County establishments have consistently run about 14 percent higher than in the state of Michigan over the past 20 years. The county is home to a high concentration of well-compensated jobs in management of companies and enterprises, many of which are clustered in downtown Detroit.
- Unfortunately, as seen in Figure 1, the high average wages at jobs located in Wayne County do not translate into a comparable household income advantage for Wayne County residents relative to Michigan overall.
- Average real wages in the county jumped by 6.8 percent in 2020. This increase reflected primarily the disproportionate loss of lower-paying jobs relative to higher-paying jobs during the pandemic, rather than individual workers receiving raises. A similar pattern was seen statewide.
- We forecast that the reversing composition effect will cause average real wages to decline this year in the county but not in the state, reflecting a relatively stronger recovery in lower-paying jobs in the county compared to the state. In 2022, we expect average real wages to decline in Michigan, while Wayne County ekes out a small real wage gain.
- Average real wages start to pick up again in 2023, rising by 0.8 percent in both the state and the county. Real wages are forecast to average \$67,000 in Wayne and \$60,500 in Michigan by 2023.
- Wayne County's average real wage in 2023 will be 5.9 percent above 2019 levels and 10.8 percent higher than in the state overall.

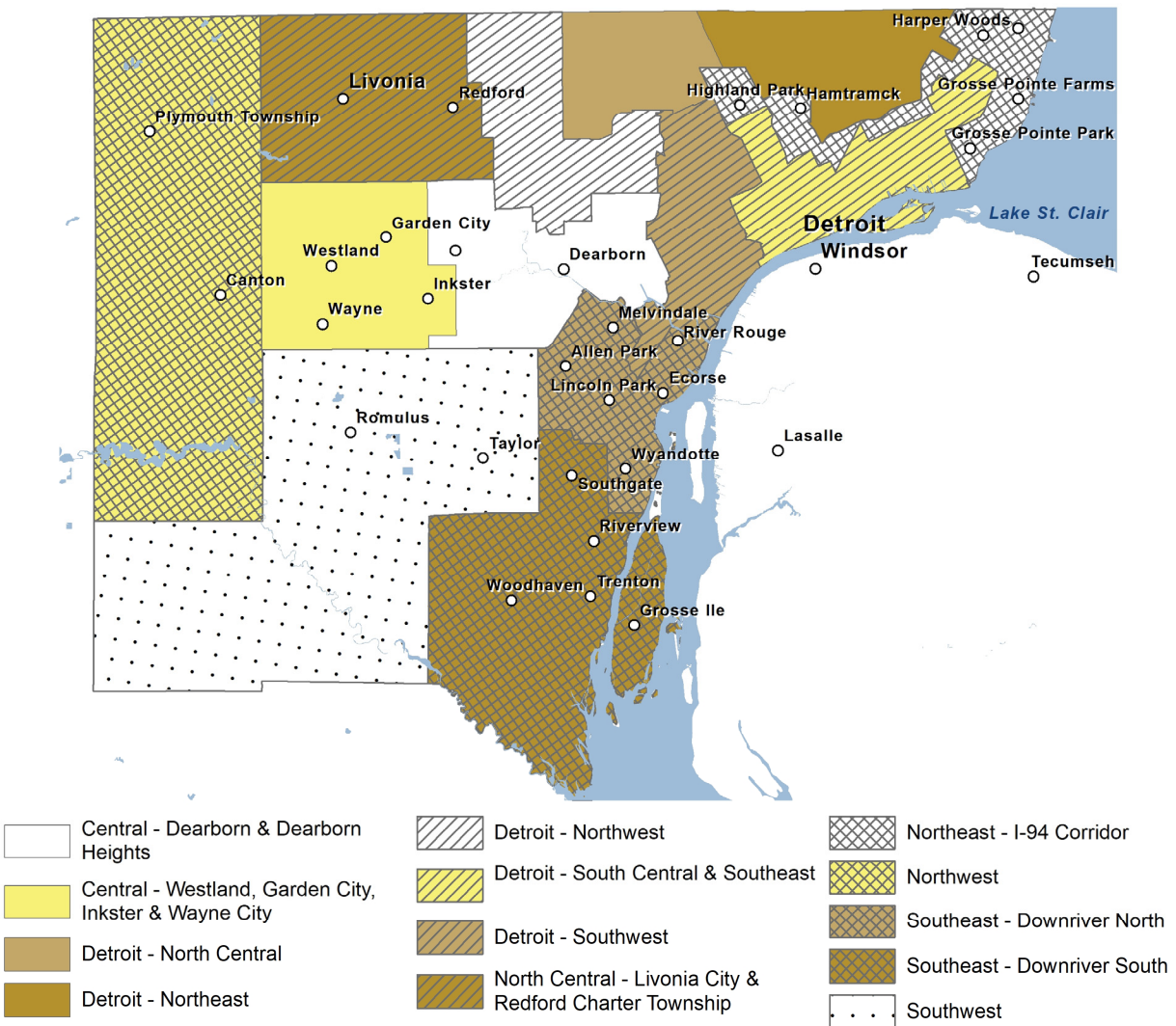
Figure 12

Average Real Wage in Wayne County by Selected Industries



- Figure 12 shows the average real wage in Wayne County for the three industry categories shown in Figure 10: blue-collar industries, higher-education service industries, and lower-education service industries. Wages are adjusted for inflation to be expressed in 2020 dollars.
- The pandemic led to a spike in average wages in the services industries: 6.0 percent in higher-education services and 12.6 percent in lower-education services. Average real wages in the blue-collar category declined 2.2 percent in 2020 due to declining average wages in manufacturing and in transportation and warehousing.
- Average real wages in the blue-collar industries have typically declined over the past two decades. Unfortunately, we are not forecasting this trend to reverse course soon. We expect real wages in these industries to end our forecast 2.4 percent below 2019 levels.
- We are forecasting average real wages in higher-education services industries to retreat slightly this year, as inflation picks up and lower-paid workers return to their jobs. As the economy settles down, we expect real wages in these industries to resume growing in 2022 and 2023. Average wages in higher-education services climb to 6.4 percent above 2019 levels by the end of our forecast in 2023.
- We project real wages in lower-education industries to slip a bit over the next two years, but they will hold onto the bulk of their gains from 2020. Real wages return to modest growth in 2023. Even with our expectation of uneven growth in 2021–2023, we are forecasting average real wages in 2023 to exceed 2019 levels by 10.7 percent.
- Although we expect real wages in Wayne County's lower-education services industries to be substantially higher at the end of our forecast period than they were prior to the pandemic, they remain about 47 percent lower than the average real wages in the county's blue-collar industries and 54 percent lower than in the higher-education services industries.
- Together, Figures 10 and 12 show that although we forecast Wayne County to stage a nearly complete recovery by 2023, we expect higher-wage industries to recover much more quickly than lower-wage industries. A concern about the recovery is therefore that income inequality will rise in the aftermath of the COVID-19 pandemic.

Detailed Wayne County Map with PUMAs



Appendix B

Average Adjusted Income and Income Growth, Wayne County PUMAs

PUMA Name	Census PUMA Code	2012 Income	2019 Income	Average Annual Income Growth
Northwest	2603201	\$122,193	\$147,547	3.0%
North Central - Livonia City and Redford Charter Township	2603202	\$93,897	\$106,690	1.9%
Central - Dearborn & Dearborn Heights	2603203	\$66,388	\$79,568	2.8%
Central - Westland, Garden City, Inkster & Wayne City	2603204	\$70,823	\$75,569	1.0%
Southwest	2603205	\$63,180	\$88,809	5.8%
Southeast - Downriver South	2603206	\$92,960	\$107,506	2.2%
Southeast - Downriver North	2603207	\$67,069	\$77,379	2.2%
Detroit - Northwest	2603208	\$51,052	\$54,159	0.9%
Detroit - North Central	2603209	\$48,158	\$63,002	4.4%
Detroit - Northeast	2603210	\$39,505	\$51,930	4.5%
Detroit - South Central & Southeast	2603211	\$43,341	\$73,991	10.1%
Detroit - Southwest	2603212	\$35,768	\$54,718	7.6%
Northeast - I-94 Corridor PUMA	2603213	\$96,504	\$105,781	1.4%
City of Detroit		\$43,838	\$59,402	5.1%
Rest of Wayne County (excluding Detroit)		\$86,050	\$101,025	2.5%

Note: All incomes are adjusted using the PCE price index and are expressed in 2020 dollars.

Forecast of Jobs in Wayne County by Detailed Industry Division

	2020	Forecast			Average Annual Wage
		2021	2022	2023	2019 \$
Total Payroll Jobs (Number of jobs)	665,889	687,238	715,999	730,407	62,554
(Annual percentage change)	(-9.3)	(3.2)	(4.2)	(2.0)	
Total Government	79,510	79,265	81,593	82,123	61,596
Federal government	13,714	13,482	13,498	13,402	87,488
State government	13,643	13,706	14,336	14,569	62,139
Local government	52,153	52,077	53,759	54,153	55,052
Total Private	586,378	607,973	634,405	648,283	62,677
Private Goods-Producing	98,387	109,854	117,148	120,000	75,747
Natural resources and mining	988	1,029	1,026	1,021	67,726
Construction	19,265	20,735	22,081	22,748	70,582
Construction of buildings	4,093	4,239	4,519	4,647	67,683
Heavy and civil engineering construction	1,793	1,864	1,933	1,992	84,643
Specialty trade contractors	13,379	14,632	15,629	16,109	69,869
Manufacturing	78,134	88,090	94,041	96,231	77,017
Printing and related support activities	966	942	934	913	52,457
Chemicals	3,280	3,431	3,702	3,879	92,865
Plastics and rubber products	1,603	1,659	1,787	1,847	71,115
Nonmetallic mineral products	976	1,083	1,103	1,087	104,413
Primary metals	3,102	3,004	3,066	3,054	96,174
Fabricated metals	7,179	7,551	7,958	8,105	69,232
Machinery	7,223	7,809	8,258	8,346	82,313
Computer and electronic products	1,443	1,382	1,375	1,359	77,531
Electrical equipment, appliances, components	715	671	739	781	93,318
Transportation equipment	40,172	48,815	53,080	54,713	79,527
Miscellaneous manufacturing	1,827	1,950	2,036	2,084	54,189
Manufacturing NEC	9,648	9,791	10,005	10,064	58,557
Private Service-Providing	487,992	498,119	517,257	528,283	59,866
Trade, transportation, and utilities	139,733	143,729	147,373	149,158	52,651
Wholesale trade	24,119	23,943	24,759	25,092	80,226
Merchant wholesalers, durable goods	14,815	14,647	15,514	15,957	86,057
Merchant wholesalers, nondurable goods	7,482	7,383	7,336	7,242	68,865
Wholesale electronic markets, agents, brokers	1,821	1,913	1,909	1,893	78,286
Retail trade	62,167	65,406	65,332	65,198	32,149
Motor vehicle and parts dealers	8,845	9,236	9,320	9,421	58,656
Furniture and home furnishings stores	1,206	1,267	1,258	1,225	35,503
Electronics and appliance stores	958	870	856	820	38,719
Building material and garden supply dealers	5,692	5,846	5,895	6,028	33,393
Food and beverage stores	12,622	13,102	13,024	12,955	25,550
Health and personal care stores	5,988	6,532	6,669	6,730	39,238
Gasoline stations	3,263	3,283	3,337	3,379	20,942
Clothing and clothing accessories stores	3,232	3,666	3,774	3,619	20,597
Sporting goods, hobby, book, and music stores	1,630	1,885	1,735	1,593	19,884
General merchandise stores	14,361	14,954	14,615	14,449	23,871
Miscellaneous store retailers	3,626	4,024	4,070	4,163	32,101
Nonstore retailers	708	740	778	815	44,229
Transportation and warehousing	49,924	50,813	53,579	55,025	61,004
Truck transportation	9,556	9,980	10,575	10,879	58,080
Couriers and messengers	4,517	5,099	5,530	5,837	46,535
Warehousing and storage	18,182	19,078	20,282	20,961	40,347
Transportation and warehousing NEC	17,669	16,657	17,191	17,348	77,451
Utilities	3,567	3,566	3,704	3,843	124,572

Forecast of Jobs in Wayne County by Detailed Industry Division (Cont'd)

	Estimate	Forecast			Average Annual Wage
	2020	2021	2022	2023	2019 \$
Information	5,793	5,671	5,642	5,591	79,881
Publishing	1,512	1,499	1,455	1,404	90,676
Motion pictures and sound recording	431	419	430	435	53,967
Telecommunications	2,031	1,816	1,789	1,773	79,634
Data processing, hosting, and related services	646	622	628	630	87,063
Information NEC	1,173	1,315	1,340	1,350	75,414
Financial activities	37,824	40,017	41,001	41,779	82,012
Finance and insurance	30,733	33,019	33,864	34,586	89,581
Credit intermediation and related activities	20,360	22,415	23,205	23,900	89,468
Insurance carriers and related activities	8,180	8,458	8,477	8,474	78,466
Finance and insurance NEC	2,193	2,146	2,182	2,213	132,818
Real estate and rental and leasing	7,091	6,999	7,137	7,193	54,575
Professional and business services	114,233	114,006	117,285	119,553	90,754
Professional and technical services	53,507	54,686	56,171	57,319	100,378
Legal services	4,084	4,156	4,096	4,031	95,034
Accounting and bookkeeping services	5,334	5,382	5,378	5,338	92,578
Architectural and engineering services	12,277	12,638	13,336	13,910	97,157
Specialized design services	1,414	1,408	1,500	1,588	96,353
Computer systems design and related services	6,959	6,842	6,838	6,807	111,476
Management and technical consulting services	4,252	4,501	4,559	4,655	89,394
Scientific research and development services	11,284	11,171	11,330	11,428	132,709
Advertising, PR, and related services	3,754	4,082	4,389	4,497	79,301
Other professional and technical services	4,150	4,507	4,745	5,066	56,190
Management of companies and enterprises	24,875	20,784	21,399	22,367	147,470
Administrative support and waste management	35,852	38,535	39,715	39,867	42,860
Private education and health services	117,949	118,973	121,810	124,264	54,851
Education services	10,043	10,258	10,471	10,664	43,150
Health care and social assistance	107,906	108,715	111,339	113,600	55,977
Ambulatory health care	27,144	29,197	29,694	30,030	58,419
Offices of physicians	9,023	9,623	9,656	9,669	83,308
Offices of dentists	3,495	4,093	4,068	4,040	48,792
Offices of other health practitioners	2,608	2,833	2,863	2,857	43,545
Home health care services	5,008	5,063	5,310	5,454	33,949
Other Ambulatory Health Care Services	7,009	7,585	7,797	8,011	56,939
Hospitals	51,084	50,450	51,001	51,883	69,136
Nursing and residential care facilities	16,756	16,097	17,172	17,903	32,613
Social assistance	12,923	12,971	13,473	13,784	33,091
Leisure and hospitality	53,147	55,890	63,660	67,025	28,614
Arts, entertainment, and recreation	6,811	6,939	7,958	8,529	66,680
Accommodation and food services	46,336	48,951	55,701	58,496	22,804
Accommodation	6,565	7,442	8,823	9,328	38,152
Food services and drinking places	39,771	41,509	46,879	49,169	19,360
Restaurants and other eating places	35,788	37,445	41,948	43,742	18,716
Full-service restaurants	16,215	16,725	19,806	20,787	19,940
Limited-service restaurants	17,968	18,928	20,387	21,221	17,600
Other Restaurants and Other Drinking Places	1,606	1,792	1,755	1,734	16,218
Special food services	2,507	2,619	2,990	3,310	24,869
Drinking places, alcoholic beverages	1,476	1,445	1,940	2,116	20,882
Other services	18,369	18,794	19,448	19,874	37,052
Private unclassified service-providing	944	1,038	1,038	1,038	36,133

Addendum

Unemployment Rate	14.0	5.8	5.3	4.9
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