



City of Detroit

# Economic Outlook

2021–2027

August 2022

**M** | **LSA** RESEARCH SEMINAR IN  
QUANTITATIVE ECONOMICS  
UNIVERSITY OF MICHIGAN

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UNIVERSITY

Department of Economics

## **The Detroit Economic Outlook Update for 2021–2027 Executive Summary: August 2022**

The buoyant economic mood from the past winter has given way to a much darker outlook this summer. Recession risks have risen sharply with Russia’s invasion of Ukraine and the realization that far-above target inflation would not prove transitory. Despite these problems, most measures of real economic activity, especially in the labor market, have remained strong through the second quarter of the year. We do not believe, as of the writing of this report in mid-July, that the economy is in a recession. The bigger question is whether the economy will enter a recession over the upcoming year, and if so, what it would mean for Detroit.

We track two measures of Detroit employment in order to assess the city’s labor market. The first is payroll employment at Detroit’s establishments. The data for that measure currently extends through September 2021. Through that time, payroll employment in the city had recovered approximately two-thirds of its initial pandemic job losses, and its recovery was continuing steadily. The second measure we track is employment among Detroit residents, including self-employment. The resident employment measure currently extends through May 2022. It had recovered nearly 95 percent of its initial pandemic losses by March, but it dropped by 3,100 residents, or 1.4 percent from then through May. We do not believe that those declines represent a reversal in the underlying trend, but they are not what we were hoping to see. The city’s unemployment rate ticked up from 10.4 percent at the end of 2021 to 12.7 percent this February before falling back to 10.6 percent in May.

We are forecasting Detroit to add 11,300 payroll jobs within its boundaries this year and another 6,100 next year. Payroll employment in the city recovers to its pre-pandemic level by early 2023. Job growth slows to an average of roughly 2,500 jobs per year in 2024 and 2025 and 600 jobs per year in

2026 and 2027. The city's payroll jobs count in 2027 averages 234,300, which is 5,500 jobs higher than in 2019. We expect employment in blue-collar industries to lead the way in the city's recovery, with services industries contributing little to the city's employment growth through 2027.

We project Detroit CPI inflation to register 7.7 percent this year, the fastest pace since 1981. Many forward-looking indicators suggest that inflation should begin falling in the second half of the year, but the process is likely to be slow and frustrating. We are projecting local inflation to fall to 3.8 percent next year before declining to 2.6 percent per year from 2024–2027.<sup>1</sup>

We estimate that the average wage at jobs located in the city treaded water in 2021 as lower-wage workers returned from the pandemic. Wages are projected to climb by 6.6 percent this year, but those gains will be outpaced by high inflation. Wage growth runs roughly even with local inflation over the remainder of our forecast. City residents' household income growth is projected to lag 5 percentage points behind inflation this year before running approximately 1.0–2.5 percentage points per year ahead of inflation.

While we expect the U.S. economy to avoid recession, we recognize that the risks of a recession have risen sharply. We see two different scenarios as potentially triggering a U.S. recession. The first scenario is an escalation of Russia's war in Ukraine. If Russia were to cut off natural gas supplies to Europe completely, the spillovers to U.S. manufacturing supply chains would likely be significant. It is possible that the Detroit Three auto manufacturers would be forced to halt production in this scenario, with large ramifications for Detroit's economy. Unfortunately, the timing and magnitude of any such disruptions are difficult to assess at this point in time.

The second recession scenario that we are watching is the possibility that the Federal Reserve goes too far in its efforts to bring inflation under control. The auto and construction sectors, which historically have been interest rate-sensitive industries, currently face large backlogs of demand. We

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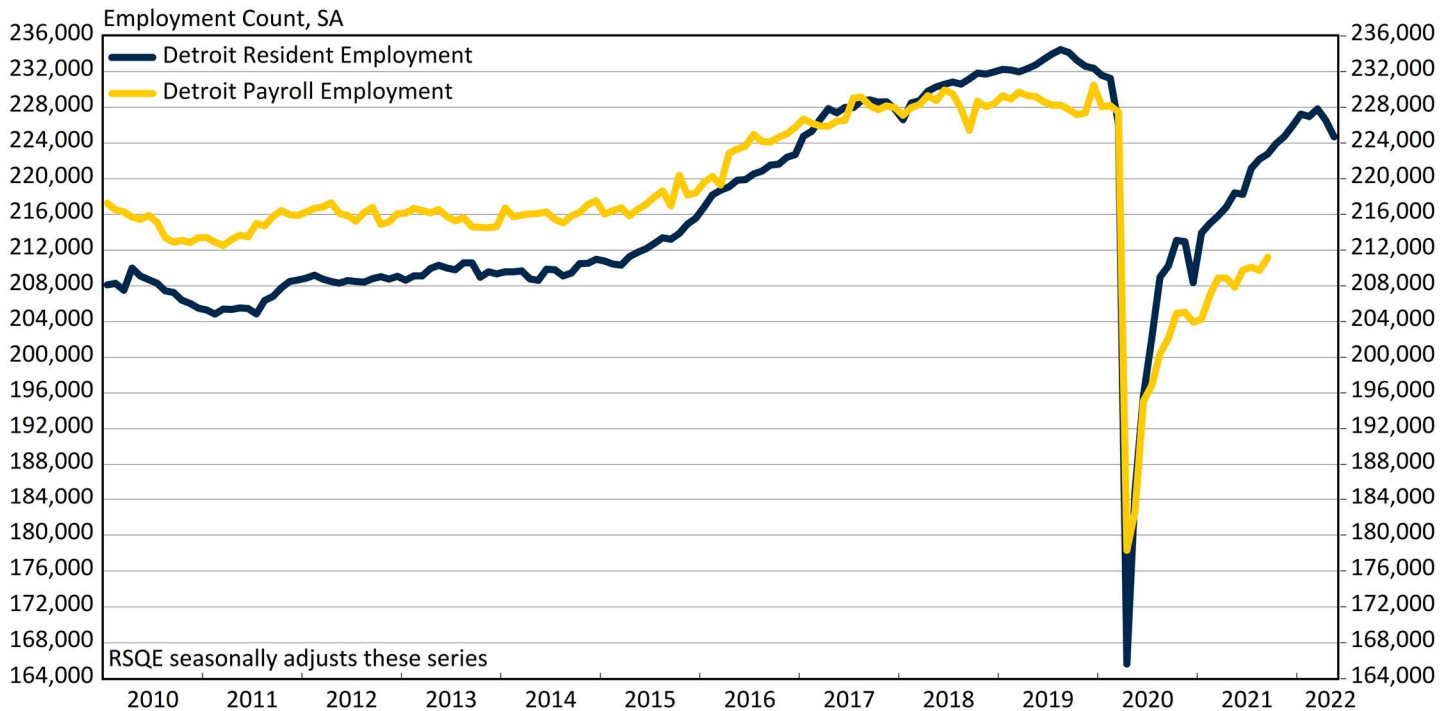
<sup>1</sup> The CPI inflation rate typically runs a bit above the Federal Reserve's preferred measure of inflation, so a CPI inflation rate of 2.6 percent is only slightly higher than the Fed's target inflation rate of 2 percent per year.

expect that those backlogs would sustain employment in those sectors in this second recession scenario. We judge that the early-1990s recession, which also featured a spike in oil prices and monetary tightening, could be an appropriate historical parallel for this recession scenario. If Detroit were to experience a similar recession today, its resident employment count would fall by roughly 6,600 people. We would expect a recession in this scenario to be relatively brief, with recovery beginning as the Fed eases up after bringing inflation under control.

We are cautiously optimistic that neither of these recession scenarios will come to pass, and that the U.S. economy will enter a period of moderate but sustainable growth and more tolerable price inflation in the years to come. Detroit's economy has room to prosper in that scenario, which remains our baseline forecast.

Figure 1

## Seasonally Adjusted Monthly Employment, Detroit Residents and Payroll Jobs

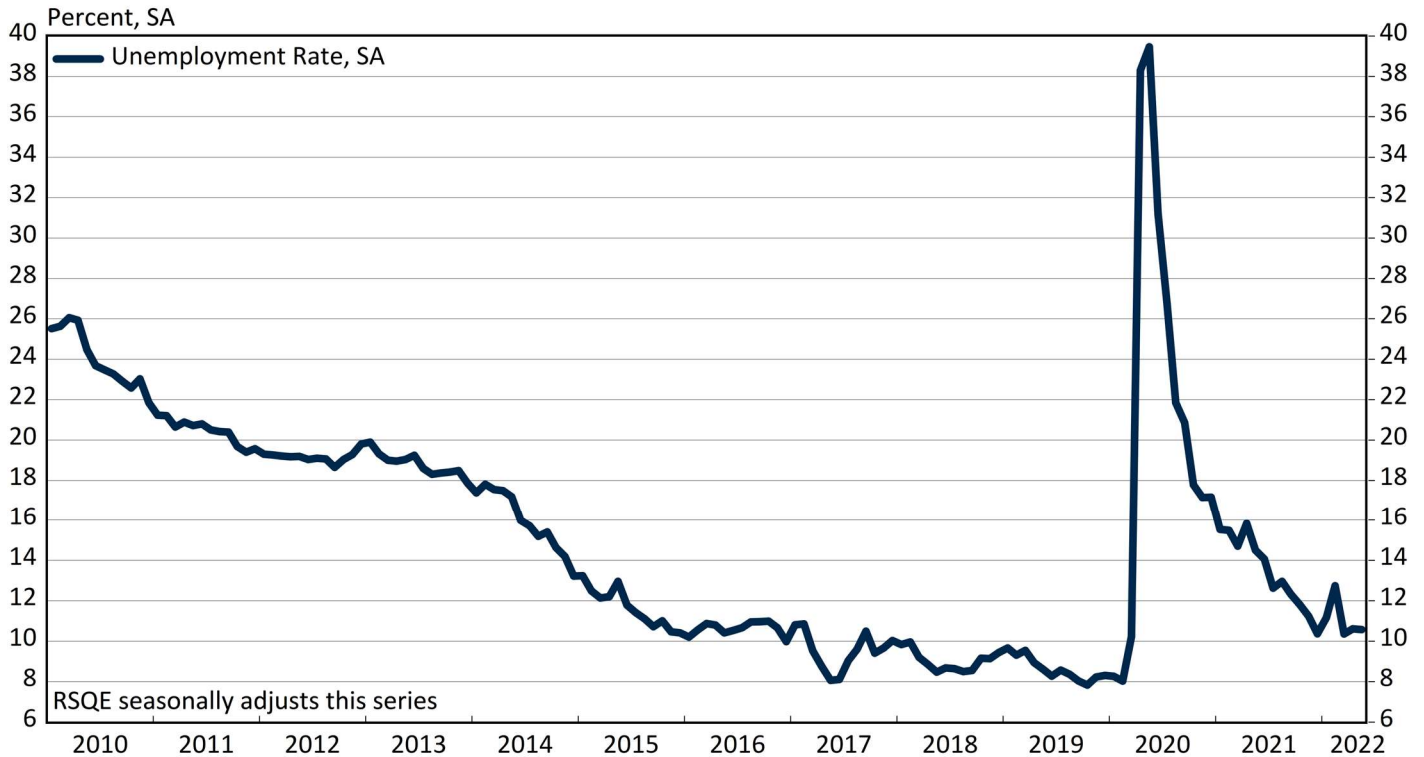


- Figure 1 illustrates two different measures of employment in Detroit's economy. The yellow line displays what we call Detroit Payroll Employment, which is the count of wage and salary jobs at establishments physically located within the city boundaries. The blue line displays what we call Detroit Resident employment, which is the count of employed Detroit residents, whether they work inside or outside the city.
- The Michigan Department of Technology, Management, and Budget's Bureau of Labor Market Information and Strategic Initiatives produces Detroit payroll employment data for the City of Detroit University Economic Analysis Partnership.
- We have seasonally adjusted both the payroll and the resident employment series ourselves.
- The payroll employment data are available with a substantial lag. At the time this forecast was produced, the data extended through the third quarter of 2021.
- Payroll employment in the city of Detroit fell by 49,900 jobs, or 21.9 percent, from February to April 2020 at the start of the COVID-19 pandemic. Employment among Detroit residents fell by 65,600 persons, or 28.4 percent, in that time.
- Payroll employment at Detroit establishments recovered by 32,900 jobs from April 2020 to September 2021, 66.0 percent of the initial pandemic losses.
- Resident employment among Detroiters recovered by 62,200 persons from April 2020 to March 2022, 94.8 percent of the initial losses.
- In April and May 2022, Detroit resident employment dipped by a combined 3,100 people, or 1.4 percent, as concerns about the broader national economy intensified.
- We estimate that the city enjoyed modest payroll employment gains during 2021Q4–2022Q2.
- Nevertheless, there is substantial uncertainty in the current economic climate. Nationally, payroll employment continued its recovery during the second quarter of 2022, increasing by a total of 1,124,000 jobs from March to June. In Michigan, however, payroll employment stayed flat over the same period.



Figure 2

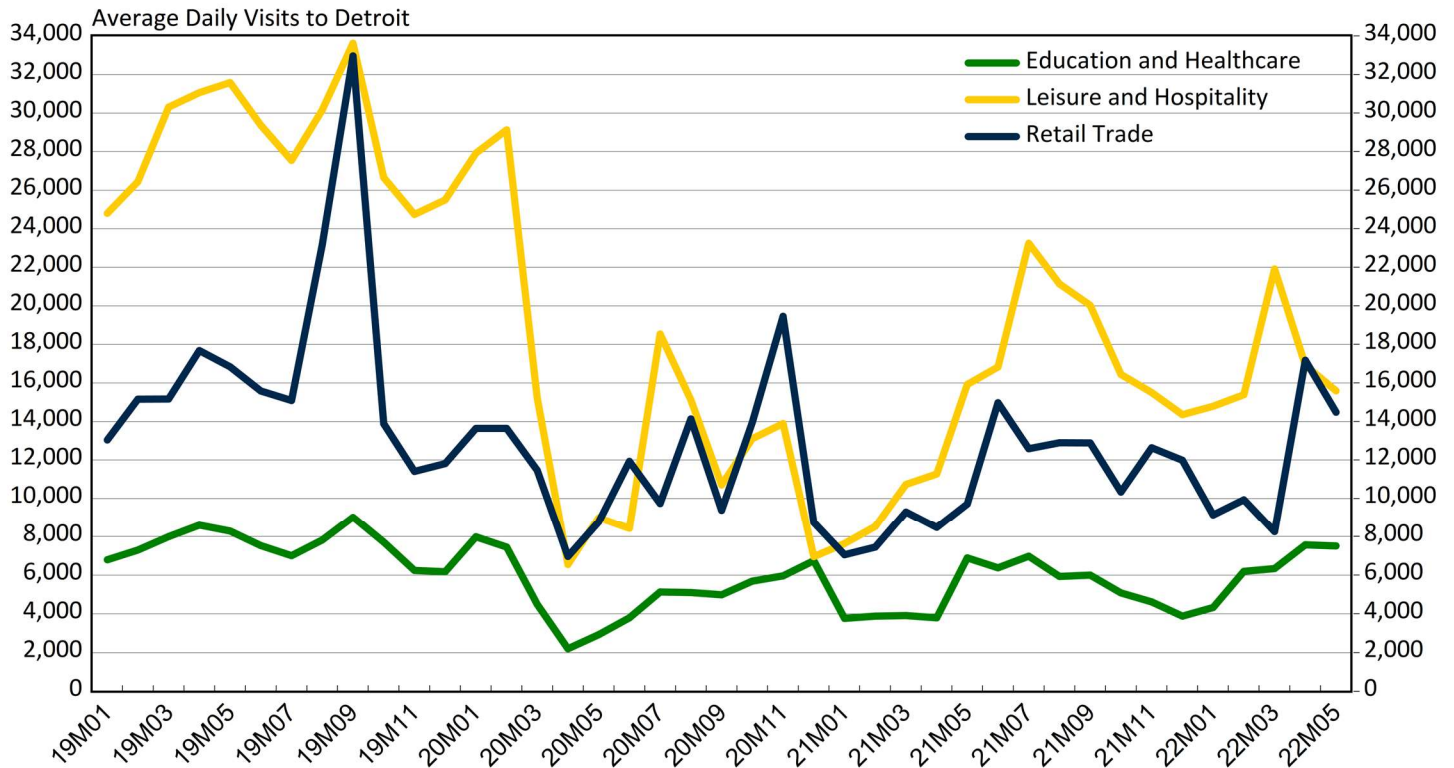
## Seasonally Adjusted Unemployment Rate in Detroit



- Figure 2 shows the seasonally adjusted unemployment rate among Detroit residents. The Bureau of Labor Statistics does not provide a seasonally adjusted version of this series. As with the monthly employment data, we have seasonally adjusted the unemployment rate data ourselves.
- Detroit's unemployment rate leapt from approximately 8.0 percent in February 2020 to 39.5 percent in May 2020, at the height of the pandemic.
- The unemployment rate declined quickly over the remainder of the year, falling to 17.2 percent in December 2020.
- Detroit's estimated unemployment rate dropped to 15.5 percent in January 2021 and hovered around that level through April before dipping to 14.5 percent in May.
- In the second half of 2021, Detroit's unemployment rate fell slowly but surely, settling at 10.4 percent in December.
- During 2021, Detroit's labor force count stayed mostly flat at its pre-pandemic level.
- The improvement in Detroit's unemployment rate during 2021, therefore, came entirely from a reduction in the number of unemployed persons.
- Detroit's unemployment rate nudged up in early 2022, reaching 12.7 percent in February with increases in both the number of unemployed persons and the labor force count. The city's unemployment rate slid back to 10.6 percent in April and May.
- Detroit's unemployment rate in May 2022 remained 2.5 percentage points above its pre-pandemic level from February 2020. In contrast, the national and state of Michigan unemployment rates were only 0.1 and 0.5 percentage points above their February 2020 levels, respectively.
- Even so, the city faced greater economic challenges during the pandemic than either the nation or the state, where the unemployment rates peaked at 14.7 and 22.7 percent, respectively. In part for that reason, we continue to be encouraged by Detroit's economic recovery in the aftermath of the pandemic.

Figure 3

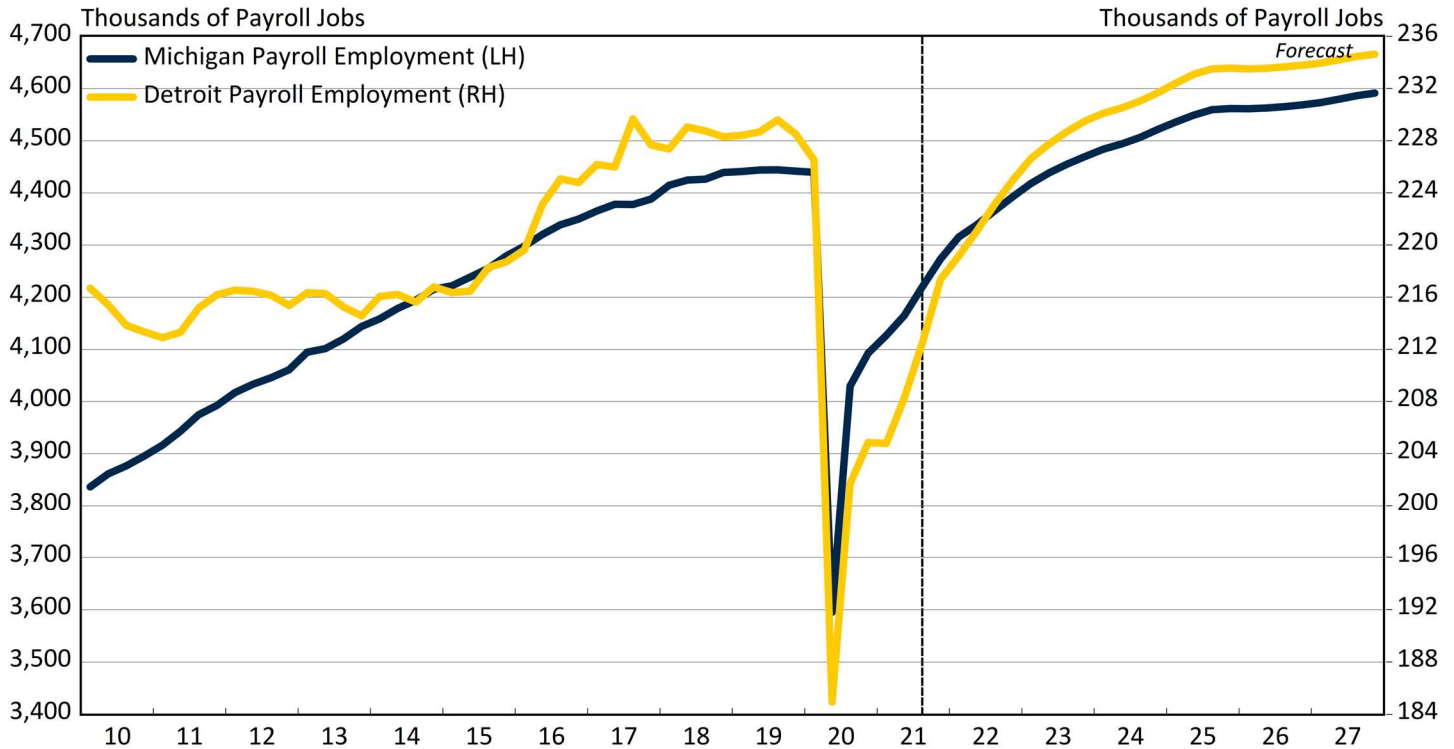
## Monthly Visits to Detroit Establishments by Industry



- Figure 3 shows monthly averages of the daily number of visits to different types of establishments in Detroit. The data come from the company SafeGraph, which tracks visits to over 7,000 locations in Detroit using anonymized cellphone location data. Establishments are categorized by industry, and visits are aggregated across all establishments within an industry.
- The figure displays results for three industry groups. The education and healthcare group in the green line includes public and private K-12 schools, universities, and hospitals. The leisure and hospitality group in the yellow line includes restaurants, hotels, and music and sports venues. The retail trade group in the blue line primarily includes retail stores.
- Visits to establishments in all three industry groups are likely highly seasonal and display significant volatility, but important trends are visible in the data.
- Foot-traffic visits to establishments in all three groups dropped off sharply at the beginning of the pandemic, falling by more than 50 percent relative to the 2019 average.
- Visits to establishments in the education and healthcare and retail trade groups both averaged approximately 30 percent lower than their 2019 levels in 2020. Visits to Detroit's leisure and hospitality establishments fell by nearly 50 percent from 2019 to 2020.
- Foot-traffic to all three groups of establishments remained depressed through early 2021 before showing signs of recovery that spring.
- There has been a clear recovery in visits to leisure and hospitality establishments in the past 12 months. Visits increased by 50 percent from June 2021 to May 2022 compared to the same period a year earlier. Despite this recovery, visits to leisure and hospitality establishments remain significantly below the pre-pandemic level.
- The retail trade and education and healthcare industries have seen slight increases in visits in the past 12 months relative to the preceding 12 months. Given the volatility in the series, however, it is not clear whether this increase is a sign of a genuine, persistent recovery.

Figure 4

## Quarterly Average Payroll Employment, City of Detroit and Michigan

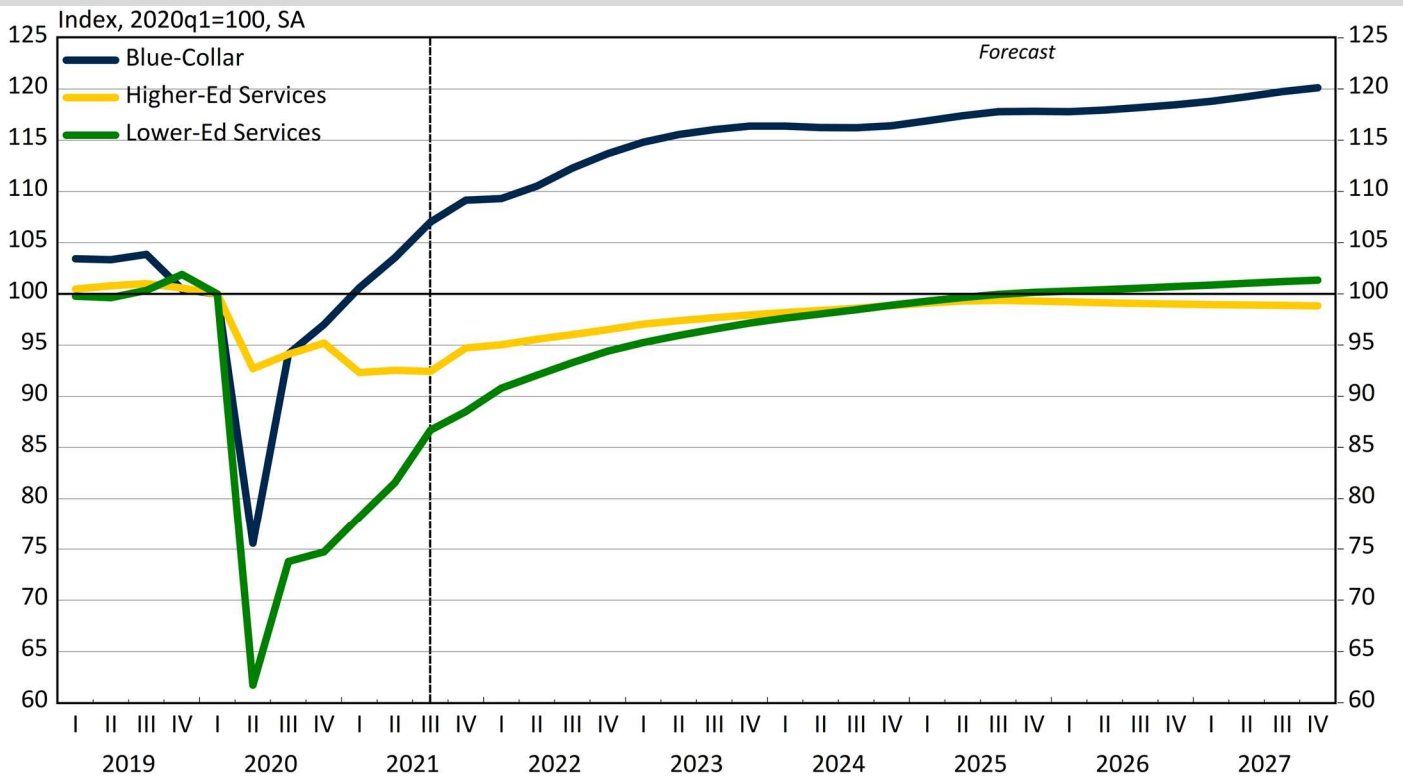


- Complete quarterly employment data for the state of Michigan were available through 2022q1 when this forecast was completed. In contrast, the most recent data for the city of Detroit extended only through 2021q3. We use timelier data for Wayne County and the Detroit metro area to guide our near-term outlook for employment in the city of Detroit.
- We expect that Detroit's economy will continue to recover from the pandemic recession even as new recession fears cloud the horizon. It is important to note that our baseline forecast does not call for a national recession but rather for slowing growth in the years ahead.
- Our relatively sanguine expectations come from a series of long-planned projects along with enough pent-up demand from the prior collapse that the Detroit economy will be able to weather the upcoming economic slowdown.
- We estimate that the city of Detroit had recovered 82 percent of its initial pandemic payroll job losses through the first quarter of 2022, whereas the state had recovered 85 percent.
- We are forecasting a much stronger recovery for Detroit than we project for the state of Michigan over the course of 2022 and 2023. We project growth in the state will subsequently outpace growth in the city as some major local projects conclude.
- We predict that job growth in the city will increase from 3 percent in 2021 to 5.4 percent in 2022 before cooling down to 2.7 percent in 2023.
- The city of Detroit is predicted to recover to its pre-pandemic level in the first quarter of 2023, one quarter earlier than the state overall.
- Job growth in Detroit continues to slow down to 1.2 percent in 2024 and 1 percent in 2025 as the economy returns to a new normal. Job growth then stabilizes around 0.2 percent in each of the final two years of the forecast as scheduled projects conclude or finish coming online, Michigan's broader labor market runs into a demographic speed limit, and the city economy battles the challenges of remote work.
- Nonetheless, the job gains we are forecasting will put the city's 2027 average payroll job count 5,500 jobs higher than 2019's level.



Figure 5

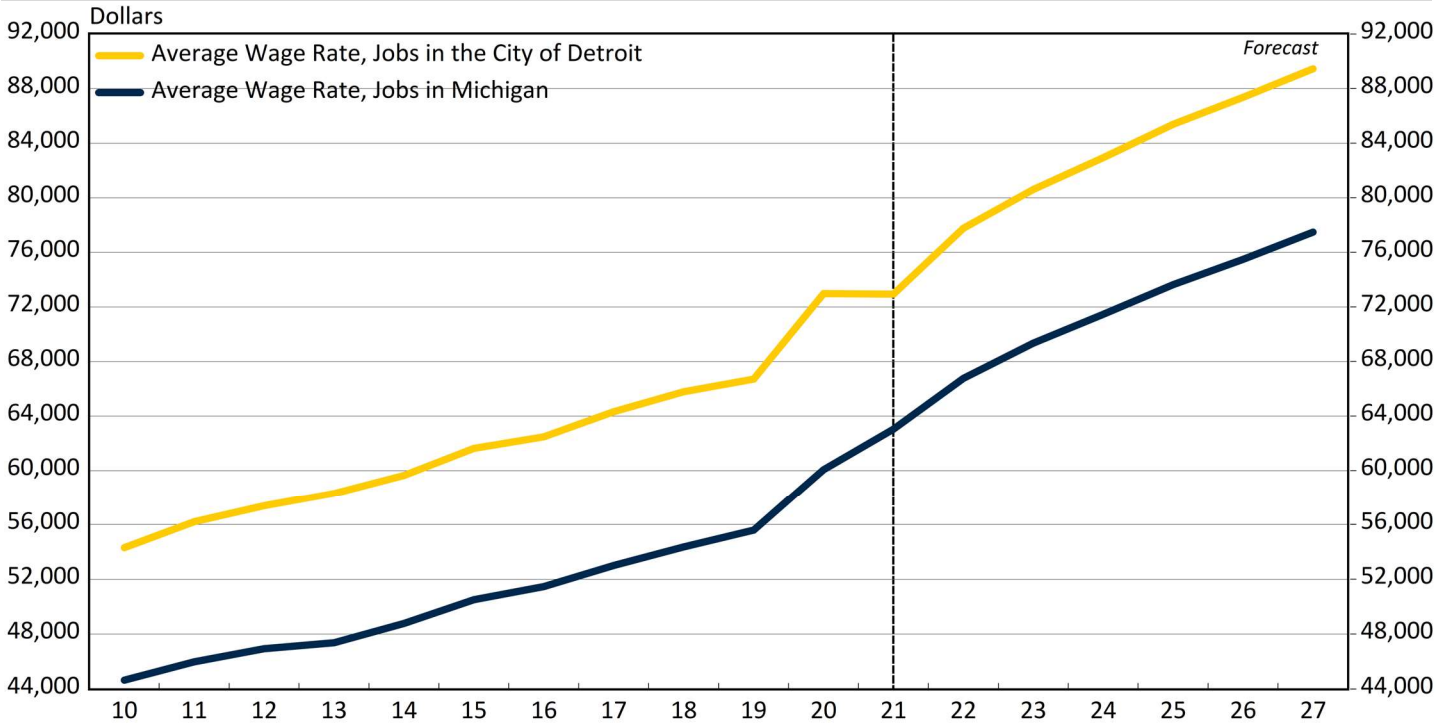
## City of Detroit Employment by Industry Group



- On the chart above, we categorize each of Detroit's industries into three groups. The graph displays our forecast for each group's total employment level, with values indexed to 100 in 2020q1.
- The **blue-collar** industry group comprises mining, construction, and manufacturing, as well as wholesale trade, transportation, warehousing, and utilities. We estimate that the blue-collar industries' job count exceeded its pre-pandemic level by 4,100 jobs in 2022q1, or 9.3 percent. The vigorous recovery and expansion of this industry group is largely driven by high-profile projects such as the Gordie Howe International Bridge, Stellantis' Mack Assembly complex, General Motors' Factory Zero, and Amazon's new distribution center.
- We expect further growth, to almost 14 percent higher than the pre-pandemic level, by the end of this year. Growth in these industries then cools off to an average of 0.3 percent per quarter throughout the remainder of the forecast, which is slower than the 0.7 percent pace seen during 2014–19.
- The **higher-educational** attainment services category includes public and private education and healthcare, finance, information, most business services, and public administration.
- Higher-educational attainment services lost 3,600 jobs in 2021q1 due to a decline of 4,000 in management of companies and enterprises. Roughly half of those missing jobs were reallocated back to the city of Detroit during the final quarter of 2021, and we expect another 1,000 jobs to be reallocated throughout the forecast.
- We forecast a middling recovery for higher-educational attainment services as higher interest rates take a bite out of job gains in the local finance industry. This industry group hovers near its pre-pandemic employment level during the final three years of the forecast.
- The **lower-educational** attainment services industries include retail trade, leisure and hospitality, administrative and business support services, and other services. These industries suffered the worst of the pandemic's impact, shrinking by almost two-fifths in the second quarter of 2020. The rebound in jobs has lagged the other industry groups so far despite a substantial recovery. We estimate that in the first quarter of 2022, these industries' job count was 9.2 percent shy of its pre-pandemic level. We expect that this industry group will continue to gain jobs at a moderate pace throughout the forecast horizon and will end the forecast just above its pre-pandemic level, a feat that the higher-educational services category fails to achieve.

Figure 6

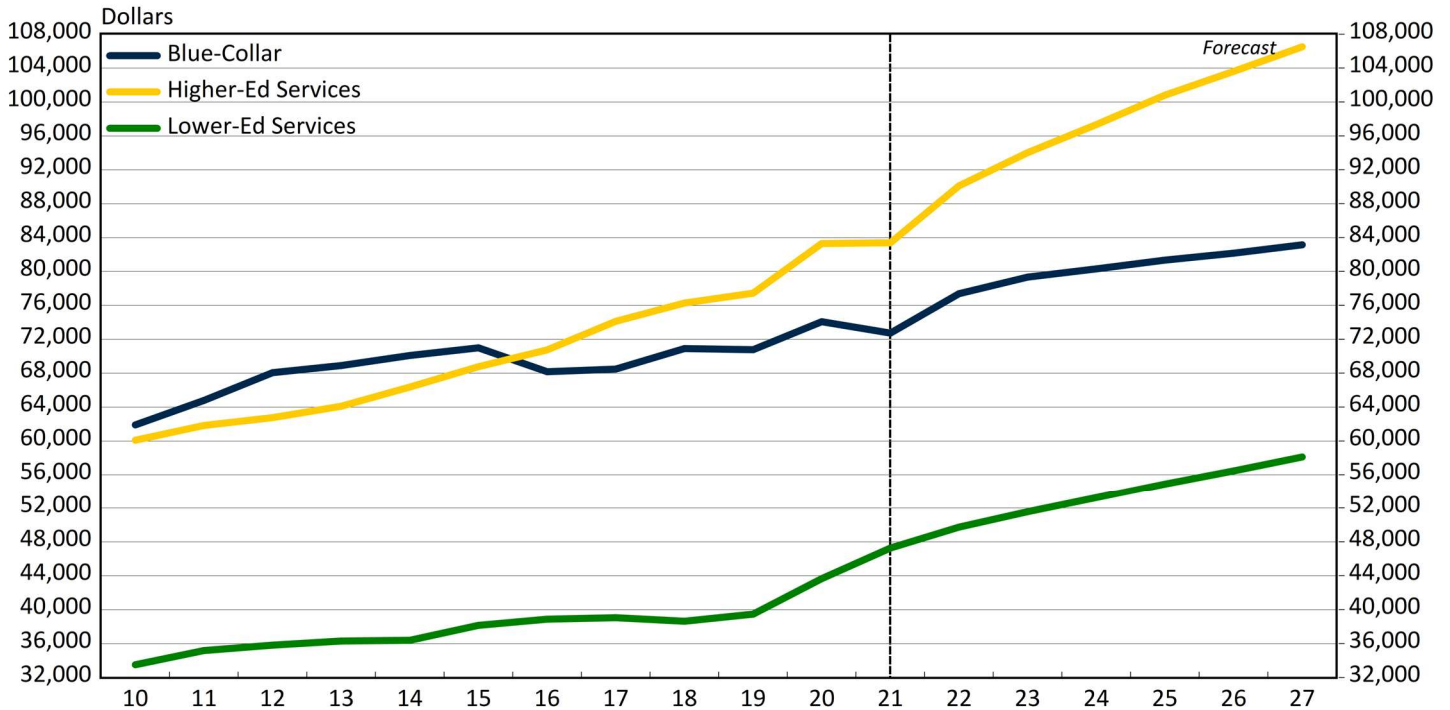
## Annual Wage and Salary Income per Worker, City of Detroit and Michigan



- Figure 6 shows the average nominal wage and salary income earned by workers at establishments in Detroit and Michigan.
- Average wages increased sharply in 2020 in both the city and the state because of the pandemic's disproportionate impact on lower-wage jobs. Citywide average wages increased by 9.4 percent, outstripping the 8.1 percent increase statewide.
- We estimate that average wages in Detroit held roughly steady in 2021 as lower-wage jobs returned.
- We predict that strong wage gains will resume in 2022, with wage growth increasing to 6.6 percent. Unfortunately, we expect inflation to eat away those gains and more, leading to a decline in real average wages.
- Wage growth in the city then cools to 3.7 percent in 2023, roughly on par with moderating inflation.
- We anticipate that wage growth will continue to moderate throughout the forecast as the Detroit economy reaches full employment. Wage gains outpace inflation in each of 2024 and 2025 but they fall short of inflation in the final two years of our forecast.
- By 2027, the average annual wage of Detroit payroll employees will reach 89,500 dollars per year, or 34 percent higher than their 2019 levels. Michigan's average wage rate increases 39 percent in that time, reaching 77,500 dollars per year.
- Even though we expect Michigan's wage growth to outpace Detroit's slightly over our forecast, we believe that the city's average wage rate will be approximately 15 percent higher than the state's level in 2027.

Figure 7

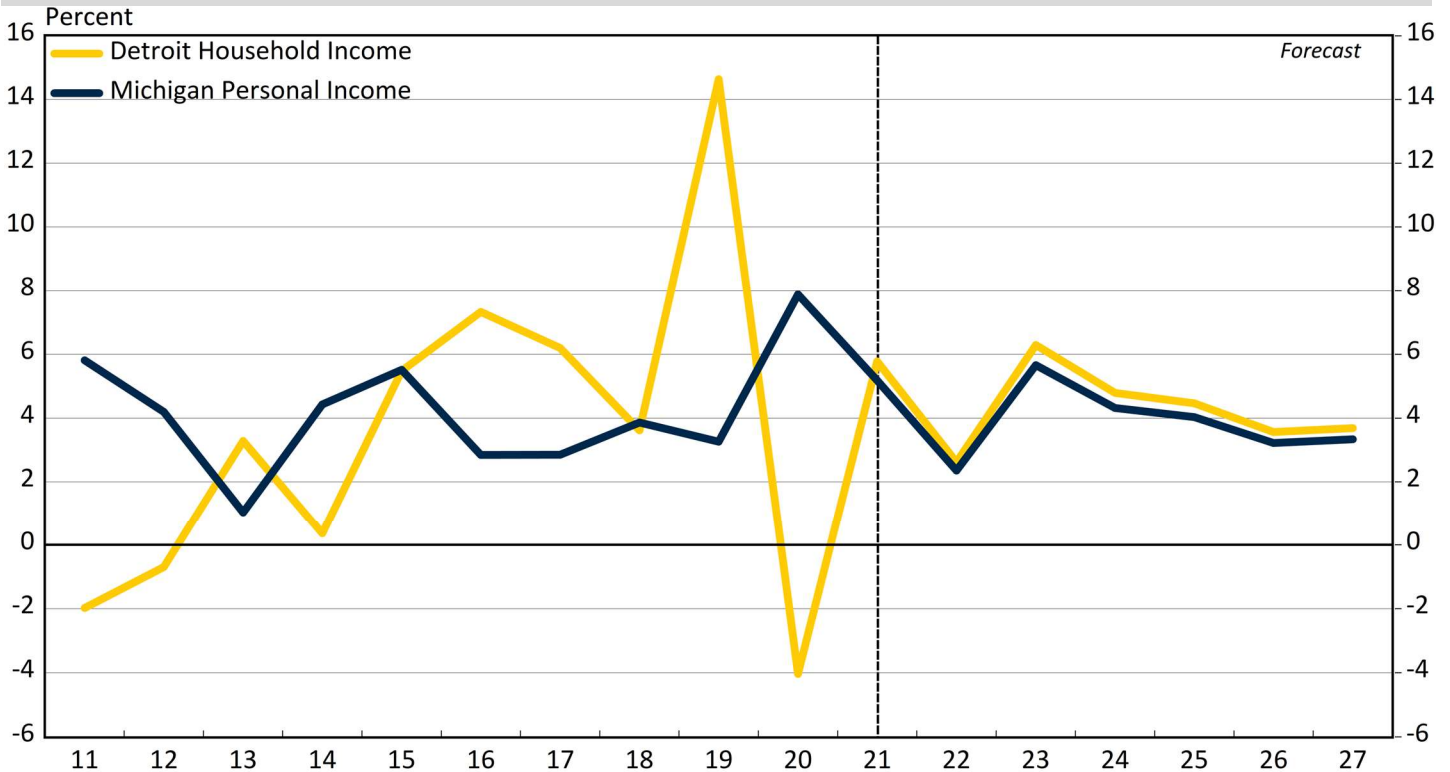
## Annual Wage and Salary per Payroll Job by Industry Groupings, City of Detroit



- Figure 7 illustrates average nominal wages in establishments located in the city of Detroit categorized by the three major industry groups shown previously in Figure 5: blue-collar, higher-education services, and lower-education services.
- Detroit's **blue-collar industries** saw average wages increase by 4.7 percent in 2020. We estimate average wages in these industries declined by 1.8 percent in 2021 as lower-paid employees return to work.
- Average wages for blue-collar industries then rebounds this year with 6.4 percent growth before slowing down to 2.5 percent growth in 2023. We expect that average wages in the blue-collar industries will increase by 1.2 percent per year between 2024 and 2027.
- **Higher-education services industries** in Detroit saw average wages increase by 7.5 percent in 2020. Unlike the blue-collar industries, average wages in higher-education services are estimated to have tread water in 2021, with an increase of just 0.1 percent.
- We expect average wage growth for higher-education services industries to increase to an astonishing 8.0 percent in 2022, making it the only industry group to stay ahead of inflation this year.
- Average wage growth for higher-education services industries then cools to 3.4 percent per year throughout the remainder of the forecast, remaining ahead of inflation each year.
- Average wages in Detroit's **lower-education services industries** rose from \$39,500 in 2019 to \$43,700 in 2020, an increase of 10.6 percent. We estimate that the average wage in these industries grew by an additional 8.3 percent in 2021 and 5.2 percent in 2022, owing to the pressure on employers to raise wages to attract workers to these jobs.
- We anticipate more moderate wage growth of 3.7 percent for these sectors in 2023. Despite that growth, we expect 2023 will be the second consecutive year of declining real wages for these industries.
- Average wage growth in Detroit's lower-education services industries then decreases to 3.0 percent per year between 2024 and 2027. With tempering inflation, that pace nonetheless represents a return to real wage gains.

Figure 8

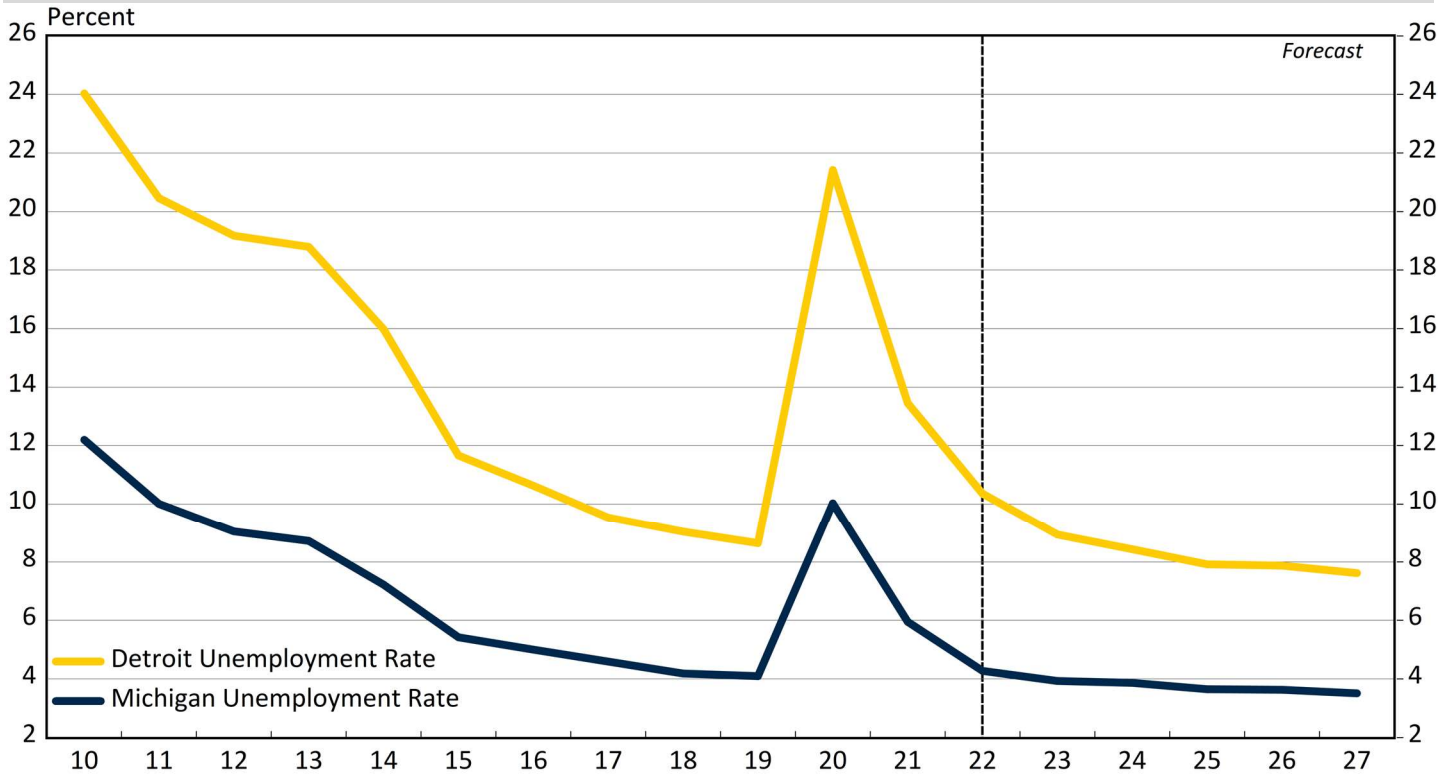
## Household Income, Detroit and Michigan



- Figure 8 shows the annual growth of household income for the city of Detroit in the yellow line and personal income for the state of Michigan in the blue line. Detroit household income data come from the American Community Survey (ACS), while the Michigan personal income data come from the Bureau of Economic Analysis (BEA).
- Due to the impact of the COVID-19 pandemic, the Census Bureau altered the standard ACS release to account for nonresponse bias, which resulted in fewer published estimates for the 2020 ACS. Therefore, the Detroit household income data we show for 2020 are calculated from the experimental microdata released by the Census Bureau rather than from published estimates.
- Michigan personal income increased by almost 8 percent in 2020 amid unprecedented fiscal stimulus. In contrast, we estimate that Detroit's household income declined 4 percent that year. We believe an important reason for the large difference between those growth rates is that the ACS questionnaire asks its respondents to omit lump sum payments from household income. Therefore, it is likely that the ACS did not capture the economic impact payments paid to Detroit residents last year.
- We believe that the acceleration of job growth led to a resumption of strong income growth in Detroit in 2021. We estimate that income grew by 5.8 percent last year in Detroit, slightly faster than the statewide pace.
- With the phase-out of federal income support, we expect income growth to slow slightly but to remain positive in 2022. We forecast Detroit's household income will grow at 2.6 percent, roughly on par with the income growth in the state.
- Total household income growth in Detroit slightly outpaces Michigan's income growth throughout the remainder of the forecast, although the two series track each other closely. Detroit's household income grows by a strong 6.3 percent in 2023 and continues to grow between 3.6 and 4.8 percent per year from 2024 to 2027.

Figure 9

## Unemployment Rate, City of Detroit and Michigan

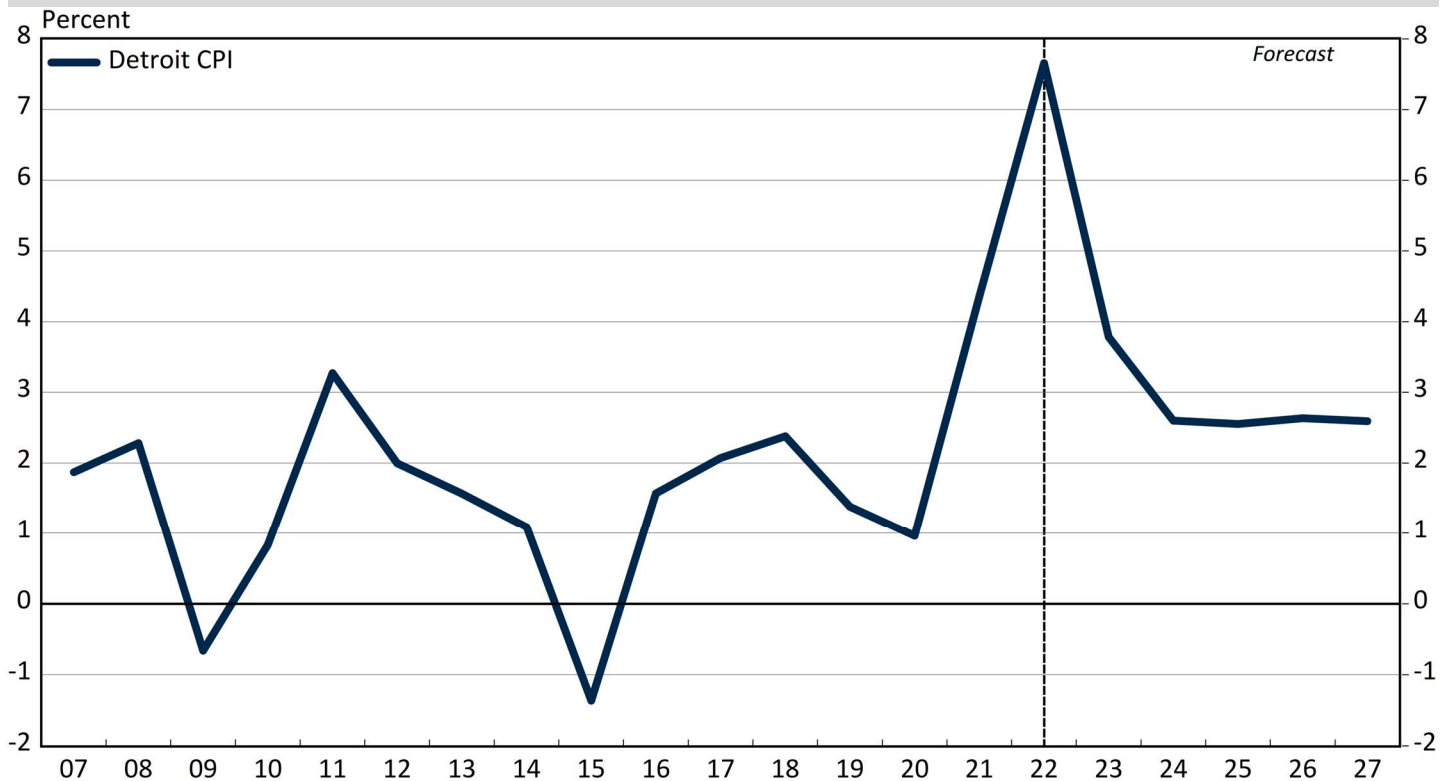


- Figure 9 shows the history and forecast of the average annual unemployment rates in both Detroit and Michigan.
- While the unemployment rate in Detroit was almost 12 percentage points higher than Michigan's in 2010, that gap narrowed considerably over the subsequent decade.
- In 2019, the unemployment rate averaged 8.6 percent in Detroit, compared with 4.1 percent in Michigan.
- In both the state and the city, the unemployment rate spiked in the second quarter of 2020 with the onset of the pandemic. The relatively quick initial recovery cut both unemployment rates by more than half by the end of that year. On an annual basis, the unemployment rate averaged 21.4 percent in Detroit and 10.0 percent in Michigan in 2020.
- With the economy reopened and the recovery well underway, the unemployment rate continued to decline in 2021. It averaged 13.5 percent in Detroit and 5.9 percent in Michigan.
- Improvements in Detroit's unemployment rate stalled in the first half of 2022 as the recovery has slowed and uncertainty has risen, but we expect modest improvements over the remainder of the year. We project Detroit's unemployment rate to average 10.4 percent in 2022, compared to 4.3 percent in Michigan.
- We forecast continued but slowing improvements over the next five years as the Detroit and Michigan unemployment rates approach and fall below their pre-pandemic levels, while the gap between the city and state rates gradually narrows.
- We project Detroit's unemployment rate to average 8.9 percent in 2023 and nudge down every year thereafter, settling at 7.6 percent in 2027.
- Our forecast for Michigan calls for an average unemployment rate of 3.9 percent in 2023, which then inches down to 3.5 percent in 2027.
- By 2027, the unemployment rates in both Michigan and Detroit will be less than pre-pandemic levels, and the gap between the two series will narrow to 4.1 percentage points from 6.1 percentage points in 2022.



Figure 10

## Inflation Rate, Detroit CPI



- Figure 10 displays history and our forecast for local inflation, as measured by the growth rate of the Detroit Consumer Price index (CPI). Local inflation jumped to 4.4 percent in 2021 and is projected to peak at 7.7 percent this calendar year, before subsiding in 2023–27.
- Early in 2021, the inflation acceleration appeared contained to a few industries undergoing the most severe supply chain disruptions. By 2021Q4, inflation had broadened considerably, and had accelerated to 6.3 percent year over year.
- Russia’s invasion of Ukraine in late February has already had a major impact on international energy and commodity prices, and the likely spike in food prices is still looming large. Local year-over-year inflation jumped to 8.9 percent in 2022Q2, and it is projected to remain elevated through early 2023.
- As pandemic-related disruptions to consumption patterns reverse and the supply chain stress recedes, the rate of inflation in durable and non-durable goods consumption is projected to slow soon. Inflation in prices of services (shelter in particular), however, is likely to linger for longer.
- Since embarking on monetary policy tightening, the Fed has signaled its readiness to act aggressively to bring inflation down. While the range of possible inflation outcomes is quite wide, our baseline assumption is that the Fed succeeds in bringing down inflation, at a cost of a moderate slowdown in growth.
- We project inflation to decelerate to 3.8 percent in 2023, as the supply constraints that have held back the recovery ease and monetary policy continues to tighten.
- Local annual inflation averaged 1.2 percent per year from 2014–2020, and we expect that inflation will run substantially ahead of that average even after the recent spike subsides in 2023. We project that local inflation will hover around 2.6 percent per year in 2024–27.
- The lingering inflation in our forecast reflects the post-pandemic global realignment of supply chains away from Southeast Asia to diversify global businesses’ exposure to public health policy and geopolitical risks.

Figure 11

## Employment Rate, City of Detroit



- We believe it is unlikely that the economy was in a recession in the first half of 2022, but we judge that recession risks over the upcoming year or so have risen significantly.
- Our baseline forecast calls for the U.S. economy to avoid a recession, but we wanted to discuss some potential recession scenarios in light of the rising risks. We see two different scenarios as potentially triggering a U.S. recession in the next year.
- The first recession scenario we see is an escalation of Russia's war in Ukraine. If Russia were to cut off natural gas supplies to Europe completely, industrial production there could be severely disrupted. Such a disruption would likely have significant spillover effects on U.S. manufacturing.
- We do not have well-developed judgments about this scenario's implications for Detroit's economy. To the extent that it paralyzes local automotive production, the potential fallout could be significant. Unfortunately, the timing and magnitude of any such disruptions are currently difficult to assess.
- The second recession scenario we consider most likely is that the Federal Reserve goes too far in its effort to reduce inflation. Monetary tightening is a more usual recipe for a recession than war abroad, and we believe that the current economic situation and recent history provide more insight into the likely consequences for the Detroit economy.
- The auto and construction sectors, which historically have been interest rate-sensitive industries, currently face large backlogs of demand. We are cautiously optimistic that those backlogs ought to cushion employment in those sectors in this second recession scenario. That could mean a relatively mild recession for Detroit's economy by historical standards.
- The chart above shows Detroit's employment rate (resident employment divided by labor force) from 1990 through the present, including the data so far for 2022. We believe that the early 1990s recession, which featured an oil price shock and tightening monetary policy, offers a reasonable parallel for our second recession scenario.
- Detroit's employment rate fell 2.9 percentage points from 1990 to 1991, and barely recovered in 1992 before staging a strong recovery in 1993.
- If Detroit were to experience a similar recession today, its resident employment count would fall by roughly 6,600, bringing it on par with the level in mid-2016. We would expect a recession in this scenario to be relatively brief, with recovery beginning as the Fed eases up after bringing inflation under control.

**Table 1**  
**Employment in the City of Detroit**  
**Number of Jobs**  
**Calendar Years**

	Actual		Forecast						
	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>TOTAL JOBS* (Number of jobs)</b>	228,797	204,505	210,736	222,082	228,159	230,829	233,148	233,628	234,315
(Annual percentage change)	(0.2)	(-10.6)	(3.0)	(5.4)	(2.7)	(1.2)	(1.0)	(0.2)	(0.3)
<b>GOODS-PRODUCING</b>	27,409	22,906	28,709	30,533	31,937	31,889	32,116	32,145	32,420
Natural resources, and mining	614	600	606	634	639	644	649	654	659
Construction	6,356	5,756	6,374	6,789	7,055	6,858	6,768	6,859	6,935
Manufacturing	20,439	16,550	21,729	23,110	24,243	24,387	24,700	24,632	24,826
<b>SERVICE-PROVIDING</b>	201,388	181,599	182,027	191,549	196,222	198,940	201,032	201,483	201,895
Trade, transportation, and utilities	30,796	29,490	30,291	31,579	32,003	32,330	32,599	32,772	33,021
Retail trade	12,766	11,859	12,544	12,834	12,785	12,792	12,775	12,703	12,615
Trade, transportation, warehousing, and utilities	18,030	17,631	17,748	18,744	19,218	19,538	19,824	20,069	20,406
Information	3,252	2,521	2,290	2,264	2,189	2,115	2,044	1,975	1,908
Financial activities	8,894	6,795	6,911	7,079	7,218	7,245	7,268	7,289	7,305
Professional and business services	34,433	34,030	31,620	34,392	35,987	36,957	37,709	37,829	37,923
Professional, scientific, and technical	12,948	12,813	12,965	13,310	13,650	14,048	14,371	14,408	14,435
Management of companies and enterprises	11,535	11,239	7,881	10,086	10,859	11,194	11,466	11,464	11,431
Administrative support and waste management	9,949	9,977	10,774	10,995	11,478	11,715	11,872	11,958	12,057
Education and health services	70,392	67,262	67,807	68,512	69,282	69,707	69,984	69,727	69,452
Leisure and hospitality	26,725	15,999	17,545	21,780	23,239	24,044	24,668	25,025	25,323
Other services	6,919	5,692	6,139	6,388	6,512	6,601	6,678	6,721	6,758
Public Administration	19,726	19,559	19,191	19,302	19,527	19,670	19,808	19,869	19,928
Unallocated services	252	250	233	254	265	271	274	276	277
<b>ADDENDA:</b>									
Household Employment (BLS)**	232,983	207,592	219,921	227,856	231,088	232,966	234,730	234,727	234,954
(Annual percentage change)	(1.2)	(-10.9)	(5.9)	(3.6)	(1.4)	(0.8)	(0.8)	(-0.0)	(0.1)
Unemployment Rate**	8.6	21.4	13.5	10.4	8.9	8.4	7.9	7.9	7.6

\*Actual data through calendar 2021q3

\*\*Actual data through calendar 2022q1

**Table 2**  
**Employment in the City of Detroit**  
**Number of Jobs**  
**Fiscal Years (July 1–June 30)**

	Actual			Forecast					
	2019	2020	2021	2022	2023	2024	2025	2026	2027
TOTAL JOBS* (Number of jobs)	228,533	217,393	204,895	217,530	225,628	229,714	232,053	233,535	233,899
(Annual percentage change)	(0.0)	(-4.9)	(-5.7)	(6.2)	(3.7)	(1.8)	(1.0)	(0.6)	(0.2)
<b>GOODS-PRODUCING</b>	28,482	24,136	26,076	29,875	31,421	32,028	31,919	32,157	32,245
Natural resources, and mining	589	627	587	625	636	641	646	651	657
Construction	6,607	5,938	6,121	6,613	6,917	7,051	6,733	6,825	6,892
Manufacturing	21,285	17,572	19,368	22,637	23,867	24,336	24,540	24,681	24,696
<b>SERVICE-PROVIDING</b>	200,051	193,257	178,819	187,655	194,207	197,686	200,134	201,378	201,654
Trade, transportation, and utilities	30,302	30,070	29,915	31,074	31,815	32,165	32,480	32,688	32,881
Retail trade	12,654	12,214	12,297	12,758	12,795	12,790	12,786	12,747	12,656
Trade, transportation, warehousing, and utilities	17,648	17,856	17,617	18,317	19,021	19,375	19,694	19,941	20,226
Information	3,262	2,965	2,343	2,289	2,227	2,152	2,079	2,009	1,941
Financial activities	7,637	7,916	6,823	6,946	7,195	7,231	7,256	7,280	7,297
Professional and business services	34,304	34,445	32,454	33,097	35,240	36,513	37,397	37,807	37,864
Professional, scientific, and technical	13,291	12,888	12,781	13,189	13,441	13,857	14,241	14,404	14,415
Management of companies and enterprises	11,454	11,337	9,307	9,159	10,536	11,032	11,357	11,484	11,444
Administrative support and waste management	9,559	10,220	10,366	10,749	11,263	11,624	11,798	11,920	12,005
Education and health services	70,780	69,190	67,067	68,169	68,931	69,524	69,883	69,899	69,583
Leisure and hospitality	27,084	22,327	14,730	20,431	22,658	23,671	24,382	24,870	25,176
Other services	7,044	6,307	5,859	6,305	6,453	6,559	6,641	6,703	6,738
Public Administration	19,416	19,761	19,405	19,099	19,427	19,602	19,742	19,846	19,896
Unallocated services	221	276	224	245	260	268	273	275	277
<b>ADDENDA:</b>									
Household Employment (BLS)**	231,929	219,687	212,833	225,386	229,352	232,197	233,897	234,871	234,766
(Annual percentage change)	(1.4)	(-5.3)	(-3.1)	(5.9)	(1.8)	(1.2)	(0.7)	(0.4)	(-0.0)
Unemployment Rate**	9.0	15.4	17.6	11.4	9.4	8.6	8.2	7.9	7.8

\*Actual data through calendar 2021q3

\*\*Actual data through calendar 2022q1

**Table 3**  
Average Wage by Industry in the City of Detroit  
Dollars  
Calendar Years

	Actual		Forecast						
	2019	2020	2021	2022	2023	2024	2025	2026	2027
Average Wage* (Dollars)	66,715	72,981	72,946	77,773	80,617	82,944	85,390	87,368	89,461
(Annual percentage change)	(1.4)	(9.4)	(-0.0)	(6.6)	(3.7)	(2.9)	(2.9)	(2.3)	(2.4)
<b>GOODS-PRODUCING</b>	69,160	72,802	68,372	74,119	76,350	76,825	77,380	77,666	78,191
Natural resources, and mining	83,875	81,892	87,040	90,570	93,833	97,214	100,717	104,347	108,107
Construction	83,648	85,021	86,689	91,975	95,600	98,253	100,965	103,029	105,361
Manufacturing	64,213	68,222	62,478	68,423	70,288	70,260	70,305	69,895	69,807
<b>SERVICE-PROVIDING</b>	66,383	73,004	73,667	78,355	81,311	83,924	86,670	88,916	91,271
Trade, transportation, and utilities	54,810	58,228	60,625	62,952	64,448	65,906	67,436	68,834	70,410
Retail trade	28,809	32,187	33,461	34,134	34,590	35,211	35,854	36,430	37,021
Trade, transportation, warehousing, and utilities	73,220	75,744	79,824	82,685	84,311	86,002	87,788	89,344	91,052
Information	85,221	108,216	109,803	116,496	117,020	117,597	119,565	121,165	123,705
Financial activities	80,297	93,163	103,076	102,794	105,938	108,678	112,328	115,190	118,630
Professional and business services	107,578	117,211	111,907	126,364	132,759	137,620	143,012	147,252	151,922
Professional, scientific, and technical	101,257	107,966	114,387	118,898	123,405	126,940	130,682	133,869	137,304
Management of companies and enterprises	160,687	176,475	168,864	192,352	202,621	210,639	219,840	227,153	235,645
Administrative support and waste management	54,226	62,327	67,263	74,867	77,790	80,661	83,734	86,778	90,045
Education and health services	61,275	64,359	67,189	70,048	72,166	74,529	76,887	79,079	81,118
Leisure and hospitality	37,907	37,753	43,715	45,731	47,923	49,597	51,181	52,602	54,001
Other services	43,978	51,481	50,612	51,545	51,683	52,732	53,865	54,888	55,936
Public Administration	68,264	72,150	74,452	80,300	83,662	86,224	88,671	90,497	92,605
Unallocated services	31,905	34,104	35,536	36,573	38,897	41,165	43,484	45,891	48,405
<b>ADDENDA:</b>									
Total Resident Population	670,031	638,176	632,464 <sup>1</sup>	629,965	628,649	628,019	627,523	627,077	626,712
Total Resident Income (Millions of Dollars)**	13,315	12,777 <sup>2</sup>	13,516	13,870	14,743	15,449	16,138	16,713	17,330
(Annual percentage change)	(14.6)	(-4.0)	(5.8)	(2.6)	(6.3)	(4.8)	(4.5)	(3.6)	(3.7)
CPI, Detroit (1982=100)***	235.5	237.7	248.1	267.1	277.2	284.4	291.6	299.3	307.1
(Annual percentage change)	(1.4)	(1.0)	(4.4)	(7.7)	(3.8)	(2.6)	(2.6)	(2.6)	(2.6)

\*Actual data through calendar 2021q3

\*\*\*Actual data through calendar 2022q1

<sup>2</sup> Calculated from the 2020 ACS Microdata

\*\*Published data through calendar 2019

<sup>1</sup> 2021 Census population estimate



**Table 4**  
Average Wage by Industry in the City of Detroit  
Dollars  
Fiscal Years (July 1–June 30)

	Actual			Forecast					
	2019	2020	2021	2022	2023	2024	2025	2026	2027
Average Wage* (Dollars)	66,158	69,520	72,446	75,734	79,122	81,824	84,251	86,366	88,408
(Annual percentage change)	(1.8)	(5.1)	(4.2)	(4.5)	(4.5)	(3.4)	(3.0)	(2.5)	(2.4)
<b>GOODS-PRODUCING</b>	68,257	71,746	70,034	70,833	75,164	76,797	77,183	77,469	77,924
Natural resources, and mining	83,224	81,281	84,407	89,193	92,186	95,508	98,950	102,516	106,210
Construction	82,742	82,455	86,886	89,201	93,664	97,057	99,703	101,980	104,177
Manufacturing	63,347	67,787	64,273	64,960	69,349	70,434	70,431	70,029	69,845
<b>SERVICE-PROVIDING</b>	65,859	69,242	72,797	76,514	79,762	82,639	85,378	87,787	90,085
Trade, transportation, and utilities	54,903	55,754	59,296	62,327	63,617	65,194	66,699	68,122	69,598
Retail trade	28,415	29,807	33,141	34,103	34,282	34,907	35,540	36,144	36,723
Trade, transportation, warehousing, and utilities	73,895	73,504	77,553	81,986	83,351	85,186	86,930	88,564	90,168
Information	84,740	100,639	101,756	114,742	116,234	117,347	118,650	120,237	122,380
Financial activities	82,273	84,167	100,688	99,881	103,685	107,387	110,736	113,628	116,909
Professional and business services	106,682	111,812	111,626	121,871	129,308	135,311	140,516	145,094	149,547
Professional, scientific, and technical	100,568	104,670	110,243	117,396	121,015	125,284	128,928	132,242	135,572
Management of companies and enterprises	157,493	170,796	166,301	184,996	196,616	206,981	215,616	223,354	231,309
Administrative support and waste management	54,299	55,389	64,244	73,574	76,236	79,239	82,213	85,229	88,388
Education and health services	60,182	62,791	65,248	69,096	71,073	73,323	75,731	78,002	80,117
Leisure and hospitality	37,909	37,202	42,386	43,889	46,997	48,784	50,398	51,908	53,297
Other services	42,666	47,436	50,551	51,676	51,403	52,194	53,302	54,384	55,406
Public Administration	69,736	71,094	71,699	78,021	82,312	84,905	87,567	89,544	91,546
Unallocated services	27,462	35,446	35,072	35,293	37,754	40,029	42,315	44,675	47,133
<b>ADDENDA:</b>									
Total Resident Population**	673,392	654,276	633,485	630,940	629,190	628,283	627,759	627,292	626,884
Total Resident Income (Millions of Dollars)**	12,524	13,106	13,091	13,684	14,284	15,107	15,802	16,430	17,016
(Annual percentage change)	(10.4)	(4.7)	(-0.1)	(4.5)	(4.4)	(5.8)	(4.6)	(4.0)	(3.6)
CPI, Detroit (1982–84=100)***	233.2	236.6	241.7	257.9	273.0	280.9	287.9	295.5	303.2
(Annual percentage change)	(1.5)	(1.4)	(2.2)	(6.7)	(5.9)	(2.9)	(2.5)	(2.6)	(2.6)

\*Actual data through calendar 2021q3

\*\*\*Actual data through calendar 2022q1

\*\*Interpolated fiscal years