



City of Detroit

Economic Outlook

2020–2026

August 2021

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

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Department of Economics

The Detroit Economic Outlook Update for 2020–2026 Executive Summary: August 2021

The data that we have so far indicates that Detroit’s recovery from the COVID-19 pandemic is well underway. Employment among city residents fell by more than one-quarter from February to April 2020; by May 2021, resident employment had recovered to about 3 percent below its pre-pandemic level. The data for employment at jobs located in the city is currently only available through September, 2020. At that time, the job count in the city remained roughly 10 percent lower than its pre-pandemic level, but it had nonetheless recovered more than half of the initial losses during the pandemic.

We expect payroll employment at jobs located in Detroit to recover to the pre-pandemic level by the third quarter of 2022, a faster recovery than we are forecasting for Michigan overall. We forecast Detroit to add 9,200 payroll jobs this year and another 14,400 jobs in 2022. The pace of growth moderates to 5,200 jobs in 2023 and an average of 2,100 jobs per year in 2024–2026. Payroll employment in Detroit ends our forecast period just shy of 240,000 jobs, about 10,000 higher than its 2019 level.

Our forecast for a stronger recovery in Detroit than statewide is driven in part by several large projects. The opening of Stellantis’ Mack Avenue assembly complex will boost job growth this year. Looking further ahead, a slew of long-planned projects will come online during our forecast period, including the Gordie Howe International Bridge, Ford’s conversion of Michigan Central Station, Bedrock’s Hudson’s site, General Motors’ Factory Zero, and a new Amazon distribution center at the Michigan State Fairgrounds. The city should also benefit from its relatively strong pre-pandemic growth trend, although uncertainty remains about the pandemic’s long-run effects on central city economies.

Detroit’s unemployment rate has declined more quickly than we had dared to hope last year. The city’s unemployment rate reached 38–38.5 percent in April and May, 2020 in the early phase of the

pandemic and averaged 22 percent for the year. Detroit's unemployment rate has averaged 10 percent so far this year and registered 9.3 percent in May. We are concerned that these statistics may be underestimating labor market slack throughout Michigan, but they are nonetheless encouraging news. We forecast Detroit's unemployment rate to average 9.5 percent this year and to decline gradually to 6.9 percent by 2026.

We forecast Detroit's recovery from the pandemic to be marked by a long-term shift in the city's composition of jobs across sectors. We divide Detroit's industries into blue-collar, higher-educational attainment services, and lower-educational attainment services industry groups. We expect employment in Detroit's blue-collar industries to end our forecast period nearly 25 percent higher than its pre-pandemic level, driven by booming employment in the manufacturing, construction, and wholesale trade, transportation, warehousing, and utilities sectors. We expect moderate growth in the city's higher-education services sectors, aided by Ford's rehabilitation of Michigan Central Station, but we nonetheless forecast employment in the higher-education services industry group to plateau around 2.5 percent above its pre-pandemic level in the back half of our forecast period. We are least optimistic about the outlook for the city's lower-education services industries, which include the hard-hit leisure and hospitality sector. We expect Detroit's lower-education services industries to recover to slightly below their pre-pandemic employment level by the end of our forecast. The lengthy recovery we are forecasting reflects numerous business closures and an enduring shift to remote work lowering demand for downtown services.

Although we estimate that the average wage rate at jobs located in Detroit in 2020 was roughly 23 percent higher than in the state overall (\$73,000 compared to \$59,400), the high wages at Detroit establishments do not translate into high wages for city residents. Wage and salary income per employed resident of Detroit averaged only \$36,100 in 2020. We are forecasting moderate wage growth in Detroit through 2026, when we expect average wage and salary income at payroll jobs located in the city to reach \$83,000, and average wages among city residents to reach \$40,700.

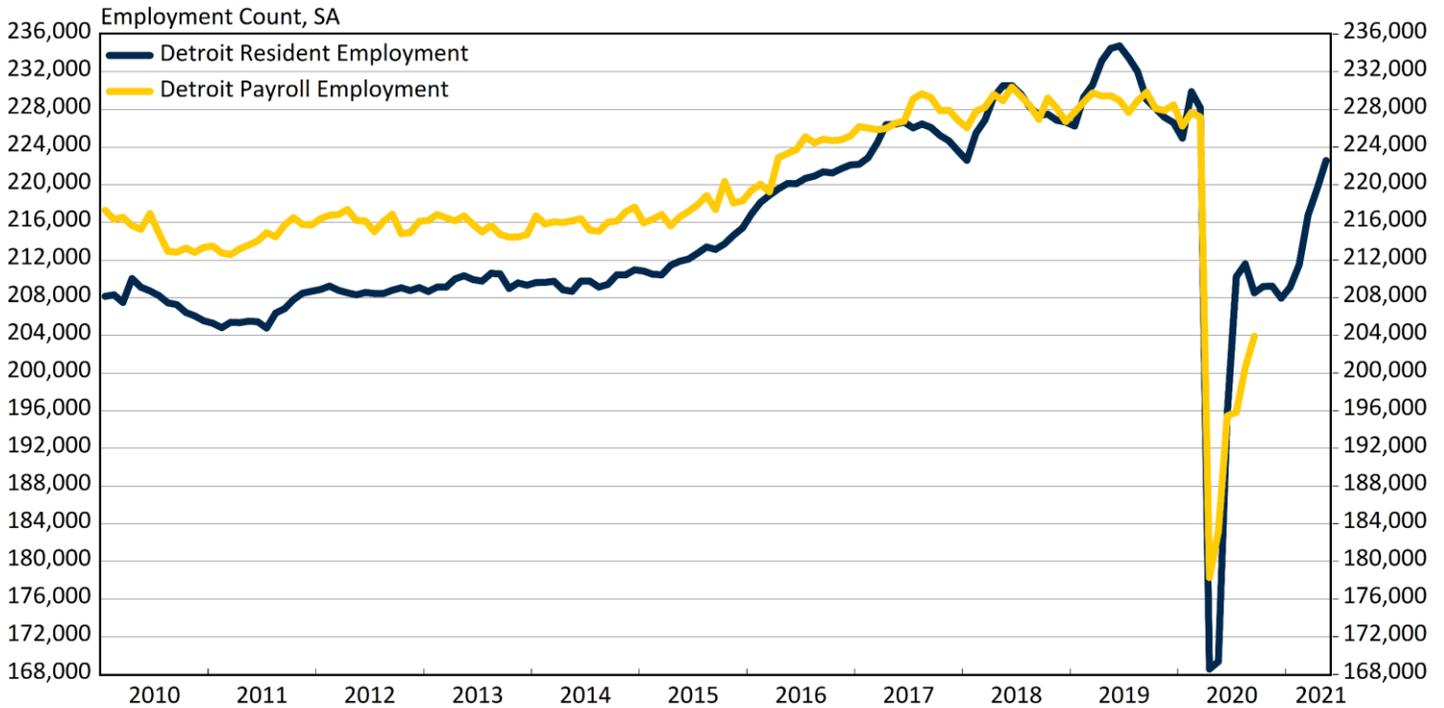
Despite the wage growth we are forecasting, we expect that Detroit's fundamental "income problem" of too many residents earning too little money will persist. We calculate that less than 30 percent

of Detroit residents working full-time earned enough to sustain a family of three at a middle-class standard of living in 2019. While most residents with at least a bachelor's degree are, in general, doing fine (59 percent earn enough to sustain as middle-class a family of three), they represent only 23 percent of the city's full-time workers. Only 16 percent of full-time city workers with a high school diploma or less can sustain a family of three at a middle-class standard of living, and those workers substantially outnumber college graduates.

We find that the differences in Detroit workers' ability to earn a middle-class family income are much wider across educational groups than across industries or occupations. Graduating from high school is no longer a ticket to a middle-class standard of living, either in the city of Detroit or anywhere else; going to college without earning a degree does not help much either. Earning a college degree, on the other hand, appears to be a reliable predictor of the ability to earn a middle-class living.

Figure 1

Seasonally Adjusted Monthly Employment, Detroit Residents and Payroll Jobs



- Figure 1 illustrates the Detroit economy as experienced by people who work at establishments physically located in the city of Detroit (payroll employment), and the economy as experienced by the city’s residents, who may work in or outside the city (resident employment).
- 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.
- Employment among Detroit residents grew more quickly than payroll jobs in Detroit from 2010 to 2019. The COVID-19 pandemic reduced employment among Detroit residents by more than it reduced employment at Detroit establishments.
- Employment among Detroit residents declined by 26 percent in April 2020 and had recovered to 9.3 percent below pre-pandemic levels by September 2020.
- Employment among Detroit residents retreated slightly in the fourth quarter of 2020 with the resurgence of COVID-19. Resident employment then picked up by an average of 2,900 jobs per month during the first five months of 2021 as the pandemic began to subside.
- The data on payroll employment in Detroit currently extends only through the third quarter of 2020. Therefore, it provides only a glimpse of the recovery from the economic damage wrought by the pandemic. Additionally, payroll jobs are counted according to establishment locations, even if employees work remotely.
- Payroll employment in Detroit declined by almost 22 percent in April 2020, and it remained 10.2 percent below its pre-pandemic level as of September 2020.
- We believe payroll employment in Detroit has moved roughly in tandem with employment among Detroit residents since then, with healthy growth interrupted by pandemic-related disruptions along the way.

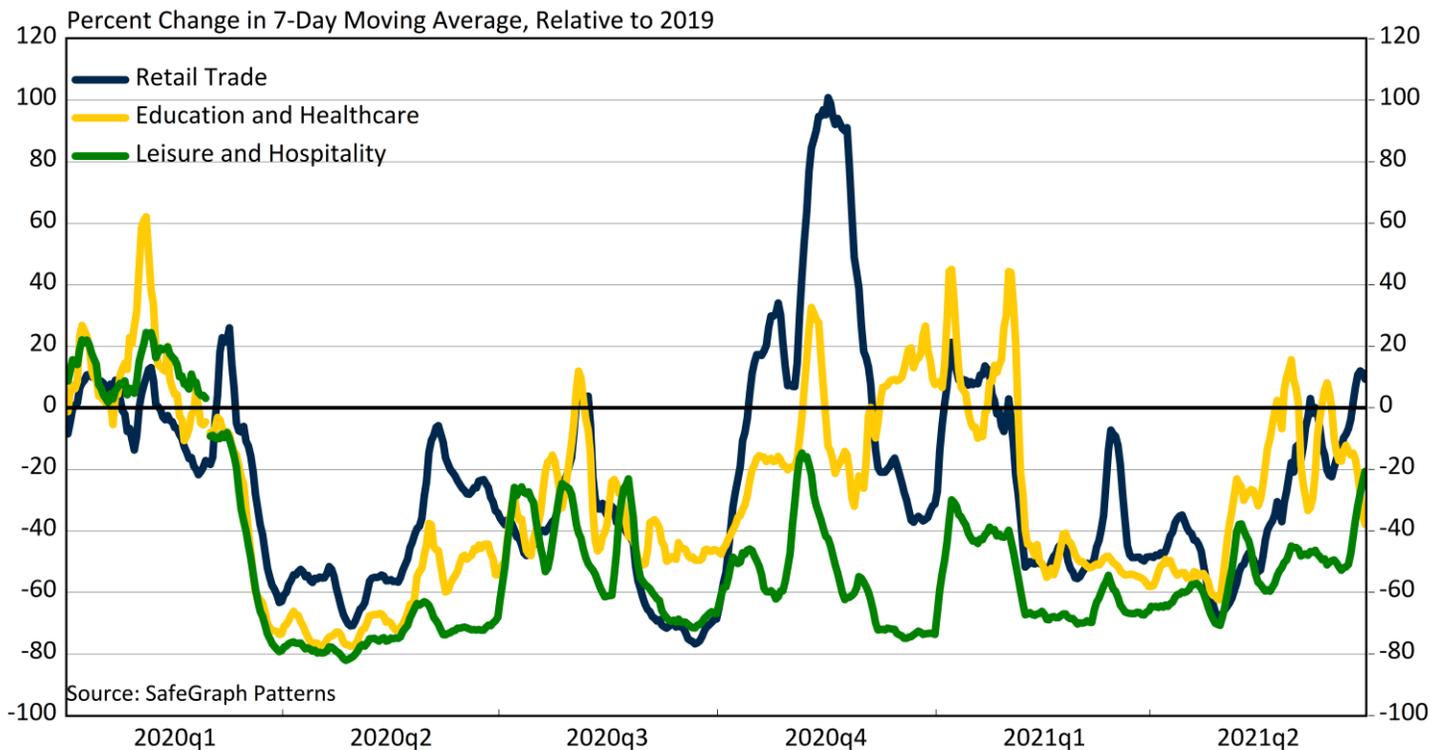
Figure 2

Seasonally Adjusted Unemployment Rate in Detroit



- Figure 2 shows the seasonally adjusted unemployment rate in Detroit. The Bureau of Labor Statistics does not provide a seasonally adjusted version of this series, so we have seasonally adjusted this data ourselves.
- Detroit's unemployment rate peaked at 38.5 percent in May 2020, but it fell to around 20 percent in July as the economy began to reopen. The unemployment rate stayed around 21 percent for the remainder of the year as the second wave of COVID-19 rolled through the state.
- Detroit's unemployment rate plummeted from 23 percent in December 2020 to 13 percent in January 2021. The plunge in unemployment, however, was driven overwhelmingly by a decline in Detroit's estimated labor force (roughly 29,000 residents) rather than an increase in estimated employment (roughly 1,000 residents).
- Detroit's unemployment rate continued to decline through April, reaching 8.2 percent that month. The unemployment rate ticked up to 9.3 percent in May.
- It is important to caution that although the unemployment rate is an important and widely followed indicator of the health of the labor market, we do not believe that it currently reflects the full extent of slack in Detroit's labor market. As of May, both the city's labor force and household employment count remain 2.5 percent below pre-pandemic levels, which signals that the city has yet to fully recover.
- We believe that many residents who remain out of the labor force will return this summer and fall as the economy continues to normalize.
- Although there is much more work to be done, the decline in Detroit's unemployment rate so far illustrates the economic resiliency that the city of Detroit has worked toward during its post-bankruptcy period.

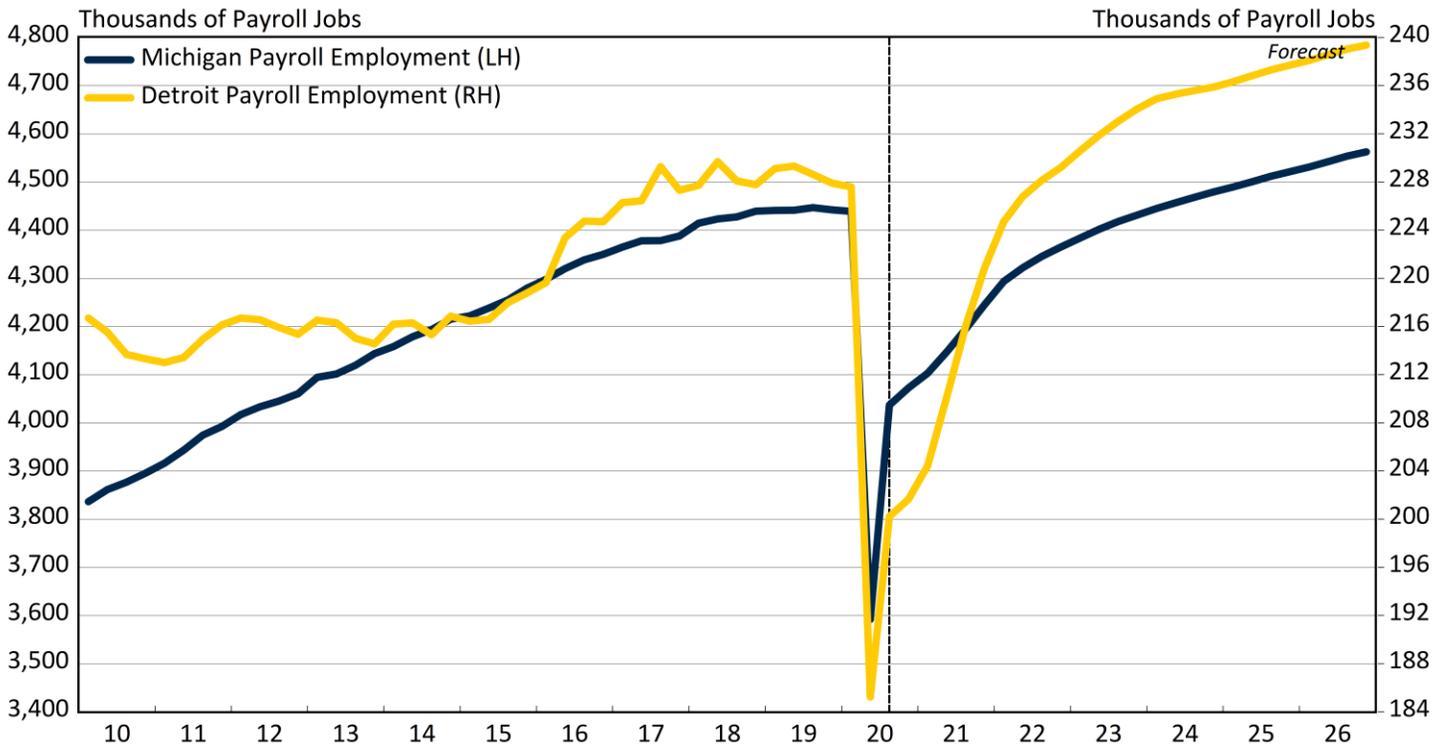
Figure 3
Daily Visits to Detroit Establishments by Industry



- Figure 3 shows the number of visits to Detroit establishments relative to the same period in 2019. We take a 7-day moving average to smooth fluctuations based on the day of the week and compare it to the moving average for the same day in 2019 to control for seasonal patterns.
- Visits to over 7,000 locations in Detroit are recorded using anonymous cell phone location data by SafeGraph. Establishments are categorized by industry, and visits are aggregated across all establishments within an industry.
- The figure displays results for three industry groups: education and healthcare, leisure and hospitality, and retail trade. Visits to all three industry groups display significant volatility, which may arise from noise in the data and the seasonal adjustment process in addition to the underlying trends.
- Foot-traffic visits to establishments of all three industry classifications dropped off sharply at the beginning of the pandemic, falling between 50 and 75 percent compared to 2019 levels.
- Visits to leisure and hospitality establishments remained depressed well into spring 2021. They rose sharply in June, but they nonetheless remain below 2019 levels. As of June 30, visits to Detroit's leisure and hospitality establishments were 20 percent below 2019 levels. This series has not reached 2019 levels since the onset of the pandemic.
- Foot traffic to retail trade establishments ran close to or higher than 2019 levels for much of late 2020 and early 2021. The number of visits subsequently dropped below 2019 levels again in February 2021, before rebounding in May and June.
- Visits to Detroit's education and healthcare establishments also recovered to around or slightly above their pre-pandemic levels in late 2020 and early 2021. They fell sharply in February 2021, amid Michigan's most recent resurgence of the COVID-19 pandemic. They ran well below their 2019 pace through April before mounting an incomplete and fragile recovery in May and June.

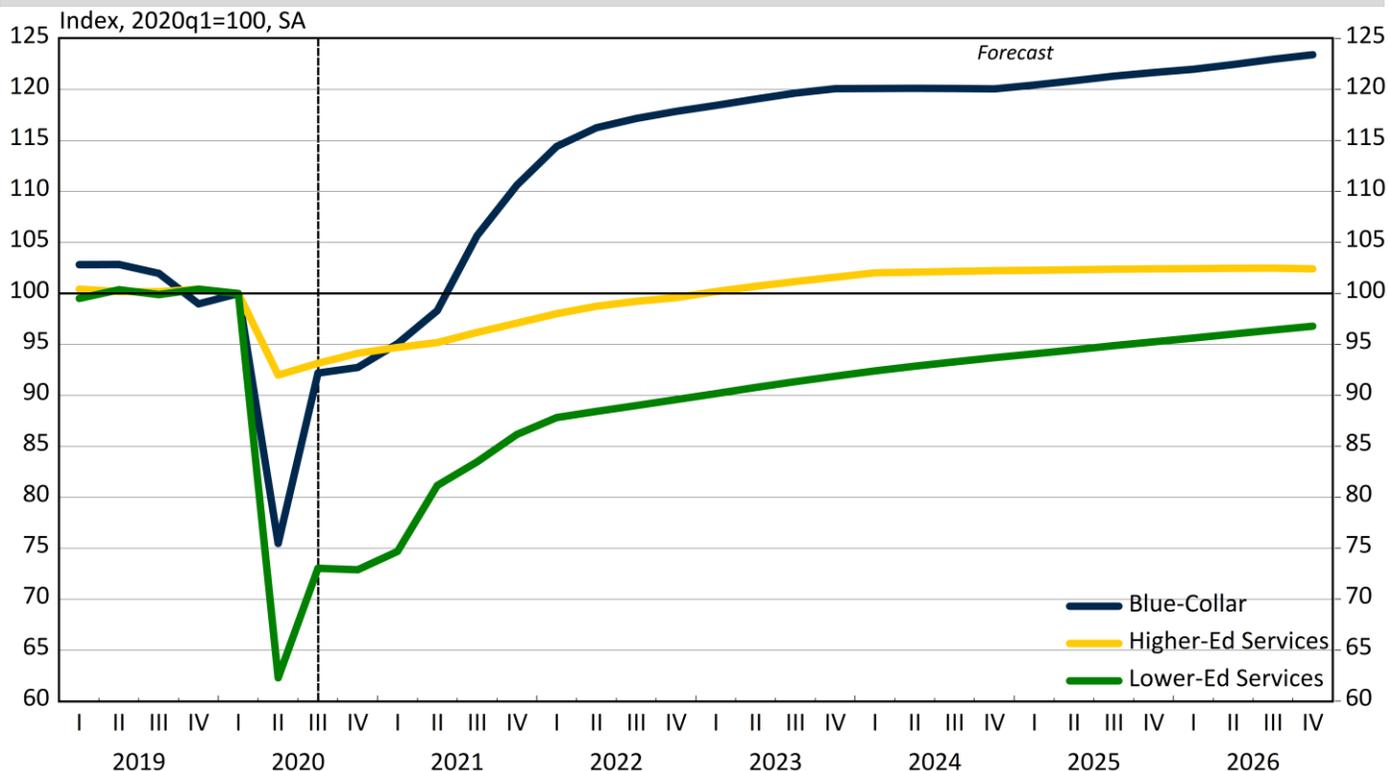
Figure 4

Quarterly Average Payroll Employment, City of Detroit and Michigan



- Complete quarterly employment data for the state of Michigan was available through 2021q1 when this forecast was completed. In contrast, the most recent data for the city of Detroit extended only through 2020q3. We use timelier data for Wayne County and the Detroit metro area to guide our near-term outlook for the City of Detroit.
- The collapse of employment in 2020q2 was very similar in Detroit and in the state, both losing about 19 percent of payroll jobs.
- The immediate post-stay-at-home rebound in Detroit in 2020q3, at 8.1 percent, was a little weaker than the state, where employment rebounded by about 12.4 percent. This underperformance reflects the city's more service-based economy.
- We project that payroll employment growth in Detroit slightly outpaced that of Michigan in 2020q4–2021q1. The pace of the city's rebound—an average of 1.0 percent per quarter or about 2,100 jobs—was muted, reflecting the ongoing pandemic and resulting mitigation measures.
- We project a brisker recovery in city jobs in 2021q2–q3, averaging 5,800 jobs, or 2.8 percent, per quarter.
- This rebound is partly due to the lifting of pandemic restrictions on the service economy, rising consumer comfort levels, and the projected reopening of schools for full-time in-person instruction this fall.
- We expect the opening of the Stellantis Mack Avenue assembly complex to add approximately 5,000 jobs to the city's payroll count, which should be fully reflected in the data by 2021q3.
- Over 2022–23, a slew of long-planned projects will come online, bringing city employment at the end of 2023 about 6,500 jobs above its pre-pandemic level.
- We project job gains to slow to a more moderate, but steady, pace in the later part of our forecast period. Job gains step down from 5,200 in 2023 to 3,000 in 2024, followed by about 1,700 per year in 2025–26. That growth path brings Detroit's total payroll employment to almost 240,000 jobs by 2026q4.

Figure 5
City of Detroit Employment by Industry Group

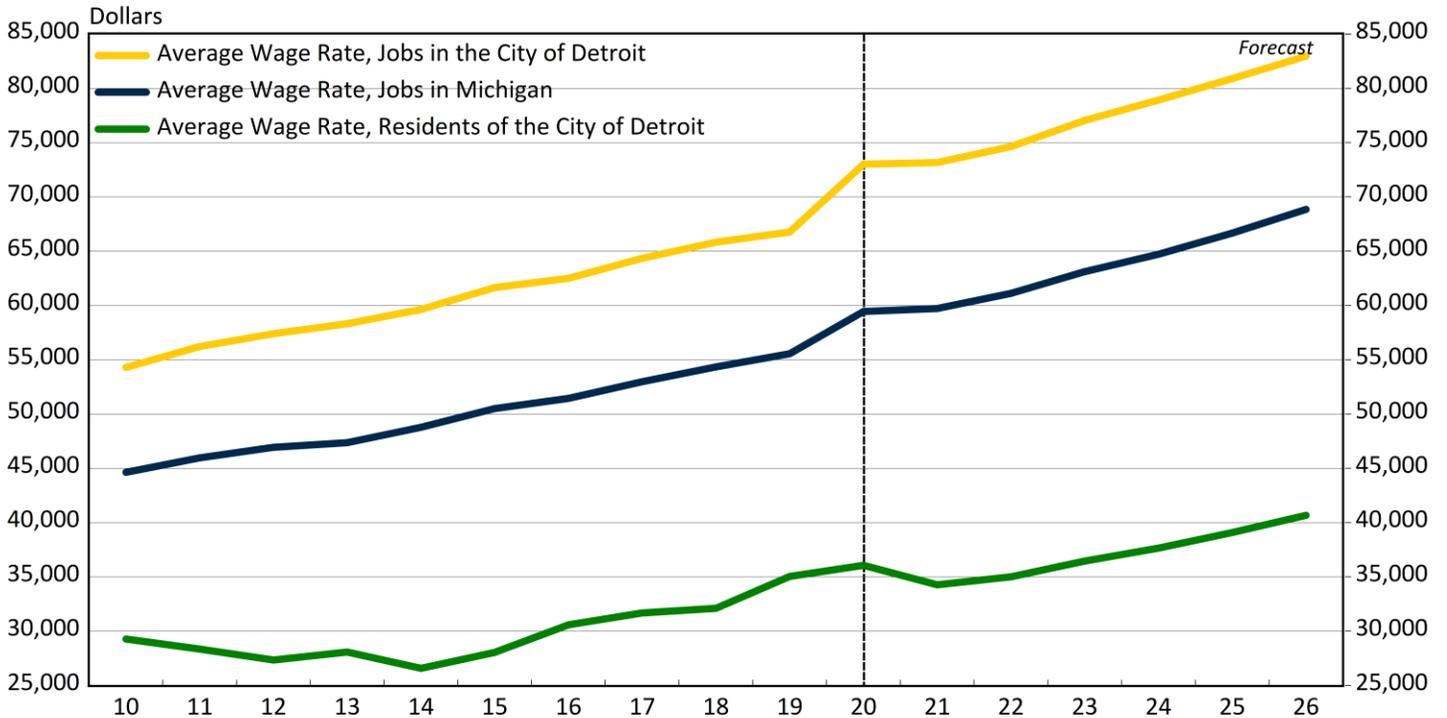


- On the chart above, we group similar industries into three groups. Values for each group are indexed to 100 in 2020q1.¹
- The **blue-collar** group comprises mining, construction, and manufacturing, as well as wholesale trade, transportation, warehousing, and utilities. These industries have already regained most of the jobs lost due to the pandemic. Starting in 2021q3, the job count is projected to move markedly above its pre-pandemic level as construction of the Gordie Howe International bridge ramps up, Stellantis hires thousands, General Motors completes the retooling of its Factory Zero, and Amazon opens a new distribution center.
- The blue-collar job count is projected to exceed the pre-pandemic level by about 11 percent by the end of 2021, growing to 20 percent by the end of 2023. Growth levels off in 2024 as bridge construction concludes, but by the end of 2026 blue-collar employment is expected to exceed pre-pandemic levels by 23 percent.
- The **higher-educational** attainment service category includes public and private education and healthcare, finance, information, most business services, and public administration. This group lost a relatively modest share of employment in 2020q2, shrinking by 8.0 percent, but we project a slow recovery. Employment does not recover to its pre-pandemic peak until 2023, when Ford completes the rehabilitation of the Michigan Central Station. By 2024, employment in this group is expected to level off around 2.5 percent above 2020q1 levels.
- The **lower-educational** attainment services 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 37.7 percent in 2020q2. The rebound so far has been muted as well. Despite a sharp projected improvement in 2021q2, we expect lasting damage due to many permanent business closures. We forecast employment in these industries to remain 10 percent below the 2020q1 level by the end of 2022. The jobs shortfall gradually improves to 3 percent by the end of 2026.

¹ Tables 3 and 4 at the end of this report present details of our forecasts for employment in the major 2-digit NAICS sectors.
 City of Detroit University Economic Analysis Partnership

Figure 6

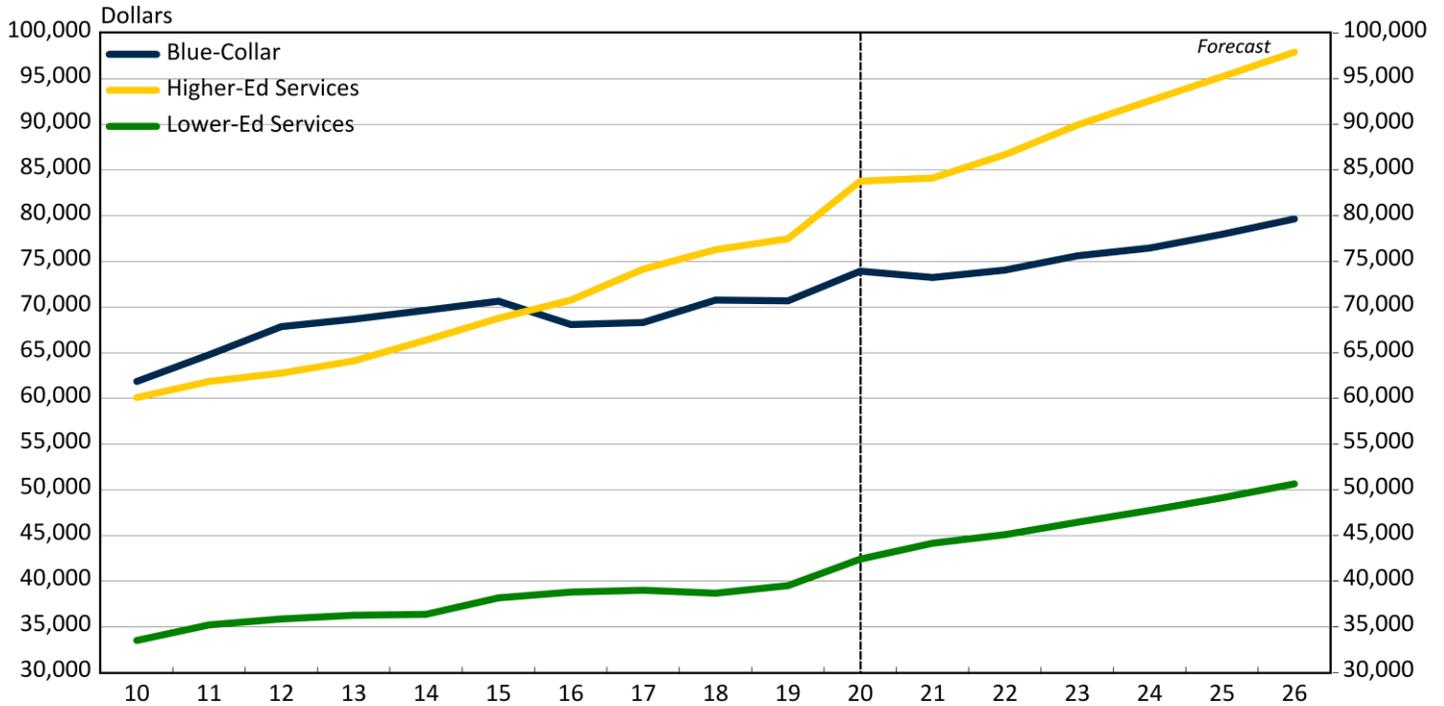
Annual Wage and Salary Income per Worker, City of Detroit and Michigan



- Figure 6 shows the average wage and salary income earned by workers at establishments in Detroit and Michigan, alongside the average wage earned by residents of Detroit.
- The average wage rate at establishments in the city of Detroit in 2020 is estimated to be roughly 23 percent higher than in the state overall (\$73,000 compared to \$59,400).
- The high wages at Detroit establishments do not translate into high wages for residents of the city of Detroit. We estimate that wage and salary income per employed resident of Detroit averaged only \$36,100 in 2020.
- Estimated average wages increased in 2020 in both the city and the state because of the pandemic's disproportionate elimination of lower-wage jobs.
- We expect that average wages will fall slightly as lower-wage workers return to work. As a result, we estimate that average wages for employed residents of the city will be 5 percent lower in 2021 compared to 2020. Average wages per payroll job in the city, however, will increase by 0.2 percent in 2021. These different patterns result from the different compositions of jobs held by residents of Detroit compared to jobs located at establishments in the city of Detroit.
- We anticipate that employed city residents will enjoy 2.2 percent average wage growth in 2022 and 4.1 percent in 2023. Average wages at payroll jobs in the city will grow at a similar pace, 2 percent in 2022 and 3.2 percent in 2023.
- Between 2024 and 2026, the average wage for city residents will grow by 3.7 percent per year. Payroll employees' average wages will grow less rapidly, by approximately 2.5 percent per year over the same period.
- We anticipate that by 2026, the average wages among Detroit residents and payroll employees in the city will reach \$40,700 and \$83,000, respectively. We expect statewide average wages to reach \$68,900 that year.
- The relatively low average wages among Detroit residents prompted us to examine what types of jobs allow workers to support a middle-class lifestyle. We explore this topic in Figures 12–16 later in this report.

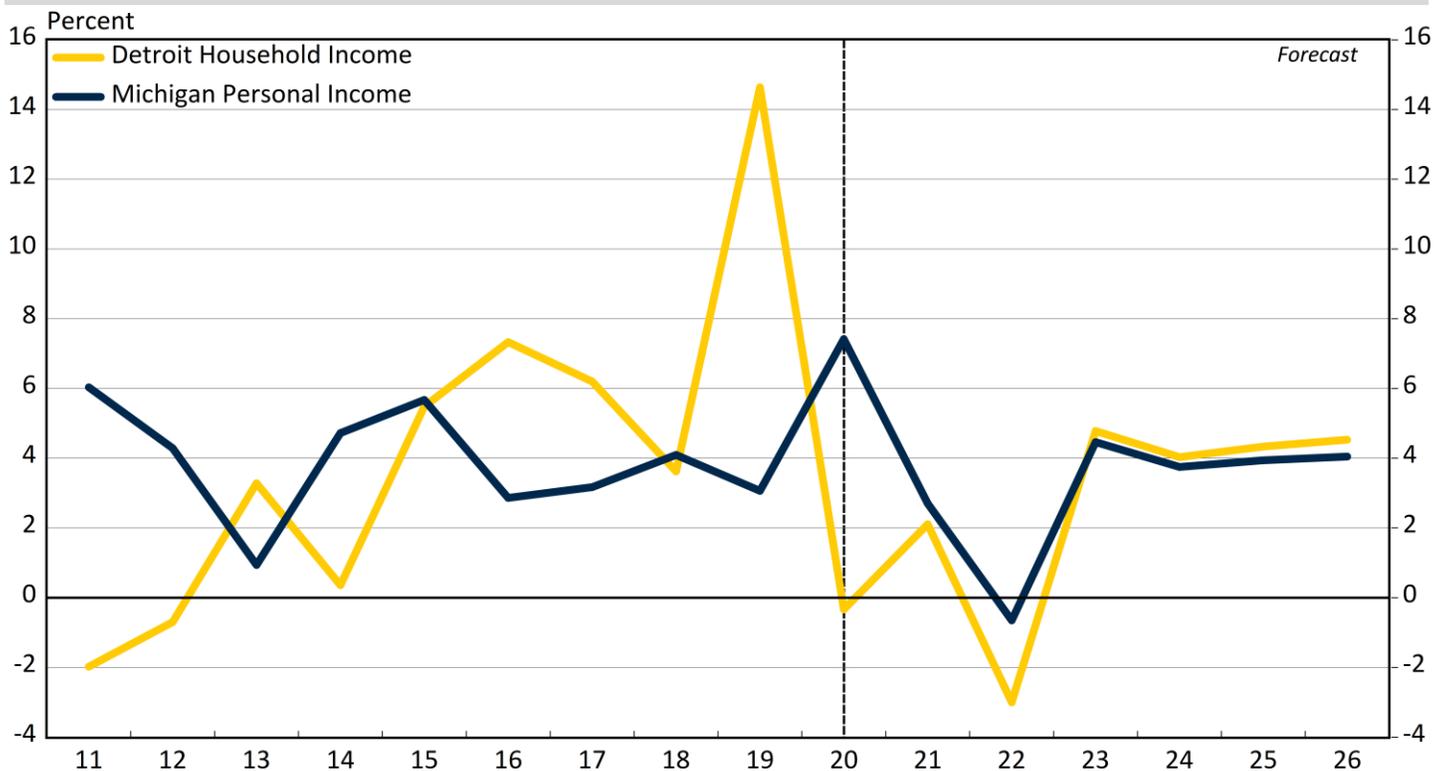
Figure 7

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



- Figure 7 illustrates average annual wages in establishments located in the city of Detroit categorized by the three major industry groups shown in Figure 5: blue-collar, higher-education services, and lower-education services.
- In 2020, the city's blue-collar industries had an estimated average wage of \$73,900, 4.6 percent higher than in 2019. We anticipate that as lower-paid employees return to work in 2021, the average wage will fall slightly to \$73,200. The average wage in blue-collar industries will start growing again in 2022, at an average rate of 1.7 percent per year between 2022 and 2026.
- We calculate that Detroit's higher-education services industries enjoyed a wage increase of 8.1 percent in 2020, from an average annual wage of \$77,500 in 2019 to \$83,800 last year. Unlike the blue-collar industries, higher-education services will not see a decline in wages in 2021, but their average wage will only increase 0.4 percent. Between 2022 and 2026, the higher-education services industries average wage will grow about 3.1 percent per year on average.
- We estimate that average wages in the lower-education services industries in the city of Detroit rose from \$39,500 in 2019 to \$42,400 in 2020, an increase of 7.4 percent. In 2021, we expect the average wage in these industries to grow by an additional 4.1 percent. The compositional effects that we expect to slow wage growth in the other industry groups this year will be less pronounced in lower-education services industries, owing to the need for employers to raise wages to attract relatively low-wage workers.
- We anticipate more moderate wage growth of 2.1 percent in 2022. Average wage growth in Detroit's lower-education service industries then picks up to an average of 2.9 percent per year between 2023 and 2026.

Figure 8
Household Income, Detroit and Michigan



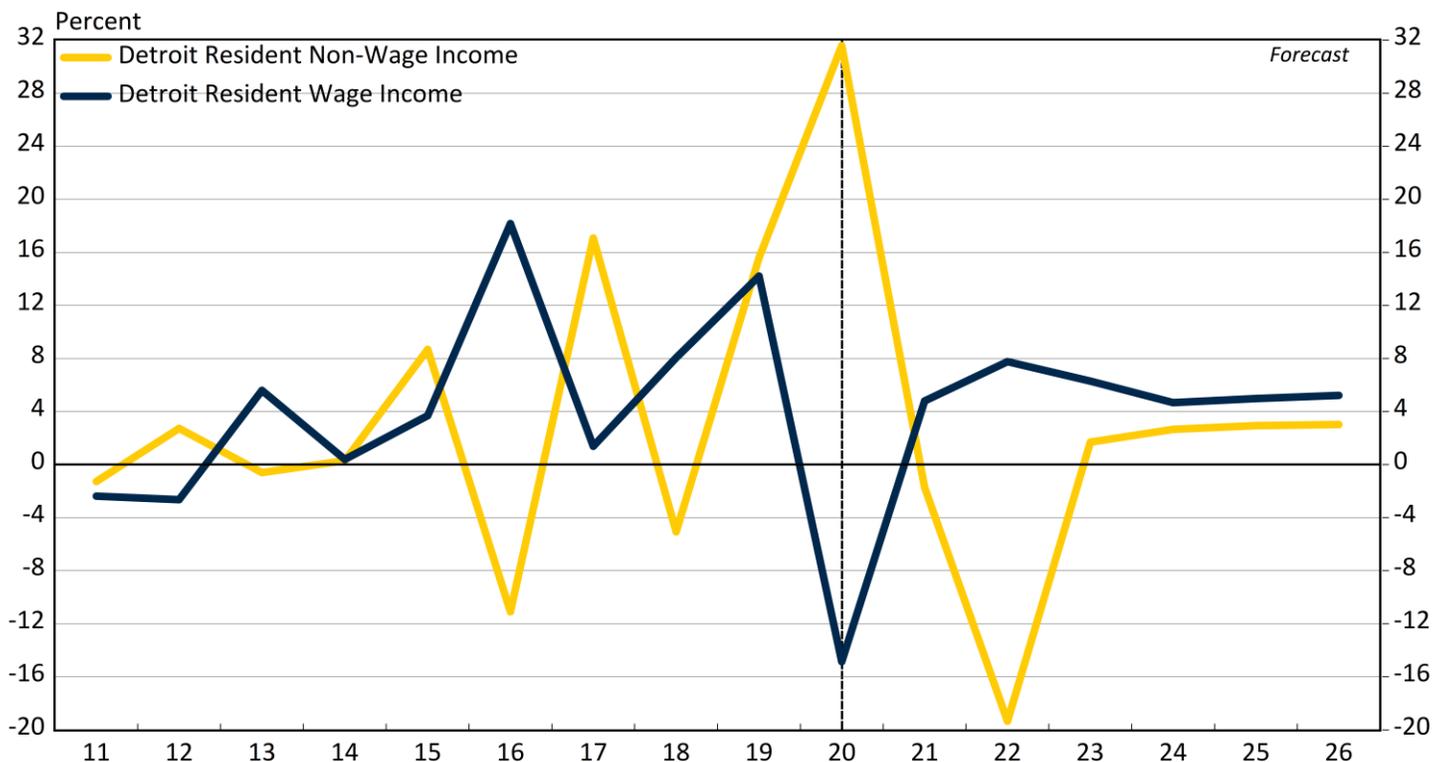
- This figure charts the annual growth of two series: household income for the city of Detroit and personal income for the state of Michigan. Detroit household income data come from ACS, while the Michigan personal income data come from the Bureau of Economic Analysis (BEA). The most recent data for Detroit household incomes are for 2019, while Michigan personal income data are available through the first quarter of 2021.
- Between 2015 and 2018, Detroit household income growth averaged 5.7 percent per year, while personal income growth in the state was slightly lower, averaging 4 percent.
- In 2019, Detroit household income growth accelerated sharply to 14.6 percent, with strong contributions from both wage and non-wage income. While the household income data for Detroit can be noisy, the city's growth in 2019 was outstanding. Personal income growth for the state, on the other hand, slowed slightly, to 3.1 percent.
- We estimate that total household income in Detroit stayed roughly flat in 2020, while personal income for the state as a whole grew by 7.4 percent. This difference is due to a substantial shift in the composition of both Detroit household income and

state personal income as a result of the pandemic. In Detroit, the large decline of wage income was almost exactly offset by the increase in federal support. In contrast, wage income in the state fell by much less, on a percentage basis, than in Detroit, and was more than offset by the increase in federal assistance.

- We forecast total household income in Detroit to grow by 2.1 percent in 2021 as jobs continue to recover and the emergency federal assistance begins to taper off. Personal income in Michigan is expected to grow at a similar rate.
- In 2022, the acceleration of job growth is not enough to outweigh reduced federal support—total household income in Detroit falls by 3 percent for the year. A similar story holds for the state, although the decline in state personal income in 2022 is not as severe. For both city and state, 2022 represents a return to the pre-pandemic balance of wage and non-wage income.
- After the reset in 2022, our forecast of growth rates for total income in the city and state track each other closely. Total household income in Detroit grows by 4.8 percent in 2023, and growth then hovers between 4 and 4.5 percent per year in 2024–26.

Figure 9

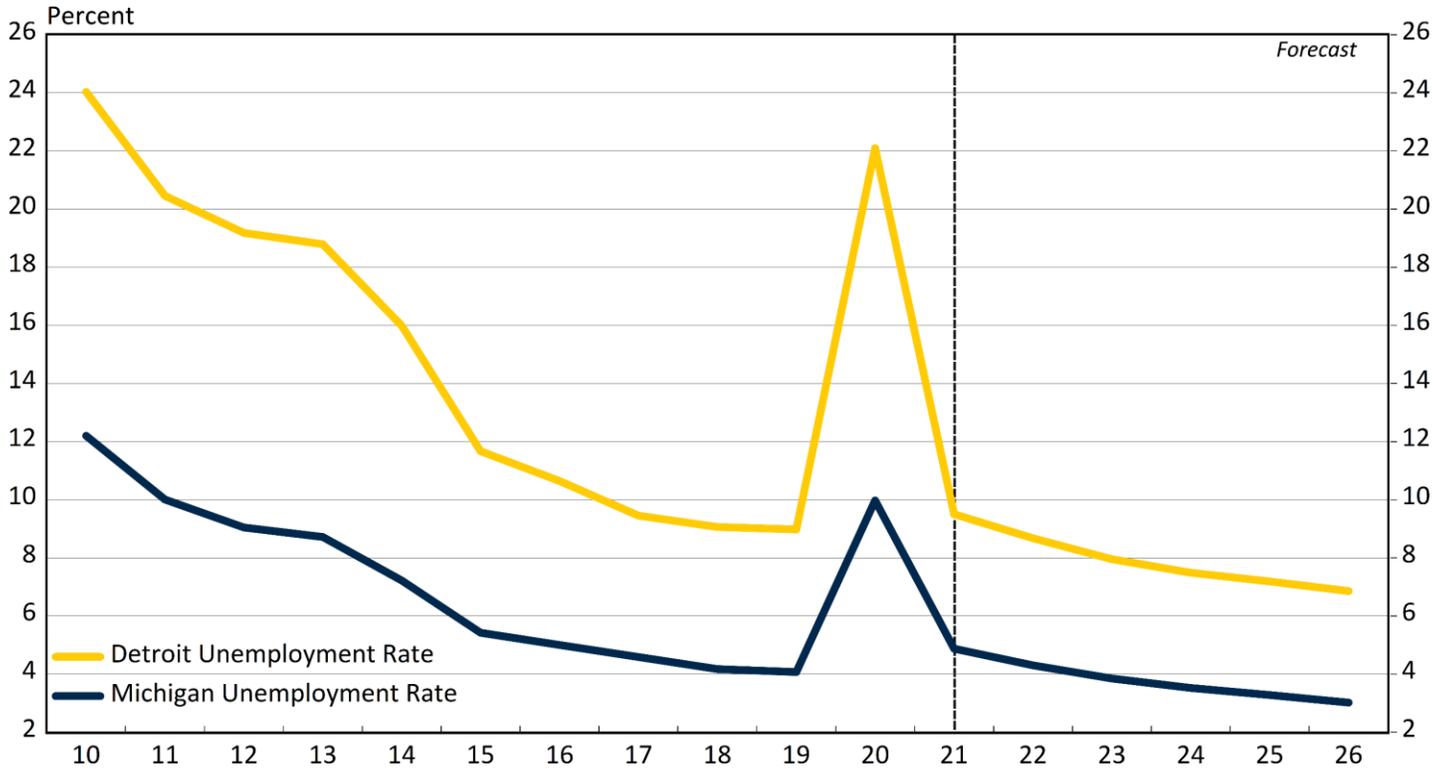
Annual Wage and Non-Wage Income Growth in Detroit



- This figure shows the wage and non-wage components of Detroit household income from the ACS, with history through 2019. It is unclear how much of the recent and planned federal income support will be reported in this data.
- The strong growth of total Detroit household income in 2019 came from gains in both wage and non-wage income. The bulk of the non-wage income gains were divided between retirement income and dividends, personal interest, and rental income. These data tend to be noisy with large margins of error, and the gains in 2019 came after a much weaker 2018 for both categories.
- We estimate that the pandemic reduced wage income in Detroit by 14.8 percent in 2020. Meanwhile, non-wage income soared by 31.6 percent in the city with the expansion of unemployment benefits eligibility, the boost to unemployment benefits, and the stimulus checks. The federal support is what allowed total household income in Detroit to stay flat in 2020.
- We forecast non-wage income in Detroit to fall by 1.7 percent in 2021 as the emergency federal benefits begin to taper off in the second half of the year.
- Wage income in the city grows by 4.8 percent in 2021 as jobs continue to rebound. This leads to overall Detroit household income growth of 2.1 percent for the year.
- Non-wage income in Detroit falls by another 19.3 percent in 2022 after the phase out of federal emergency support. Faster job growth, however, leads to an acceleration in the growth of Detroit's wage income, which increases by 7.8 percent.
- For several years prior to the pandemic, the wage share of total household income in Detroit hovered at just under 70 percent. We estimate that in 2020, the city's wage share fell to 59 percent due to the widespread job loss and increase in federal support. The city's wage share of total income is forecast to return to a more normal historical level of 67 percent by 2022.
- For 2023–26, we forecast Detroit wage income to maintain healthy growth, in the neighborhood of 5 percent per year. During this time, non-wage income in the city also begins to nudge up, with growth reaching 3 percent by 2026. Since our projections call for wage income to grow faster than non-wage income over this period, we expect the wage share of total income to continue inching upwards to just under 70 percent in 2026.

Figure 10

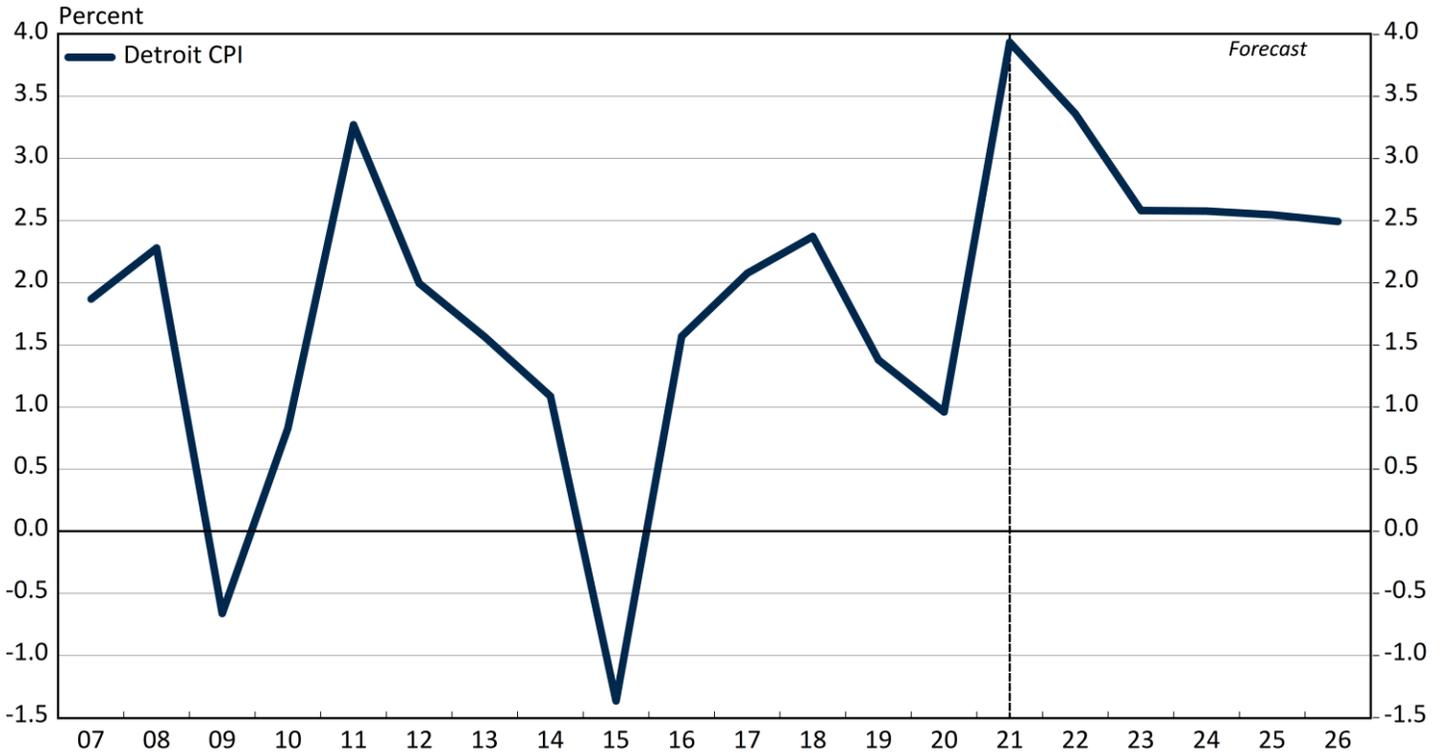
Unemployment Rate, City of Detroit and Michigan



- The unemployment rate in the city of Detroit averaged 22 percent last year, a level that had not been seen since the Great Recession. However, unlike the post-Great Recession period, the unemployment rate has fallen almost as quickly as it increased during the pandemic.
- We believe the unemployment rate will inch up a bit in the summer and fall as Detroiters rejoin the labor force. We expect the unemployment rate to average 9.3 percent this year.
- As we enter the post-COVID world, the unemployment rate in the city of Detroit falls to 8.7 percent in 2022, three-tenths of a percentage point lower than its pre-pandemic level. The city's unemployment rate recovers more quickly than Michigan's, which remains two-tenths of a percentage point above its pre-pandemic level in 2022.
- We expect Detroit's annual unemployment rate will continue to fall throughout the forecast, reaching 6.9 percent in 2026. The unemployment rate we are predicting for 2026 would be the city's second-lowest annual rate since 1990—the first-year statistics are available.
- Our forecast for near-record low unemployment rates reflects the strong job growth we expect in the city, driven by several high-profile developments. Those job gains more than outpace the gradual gains in the city's labor force that we are forecasting.

Figure 11

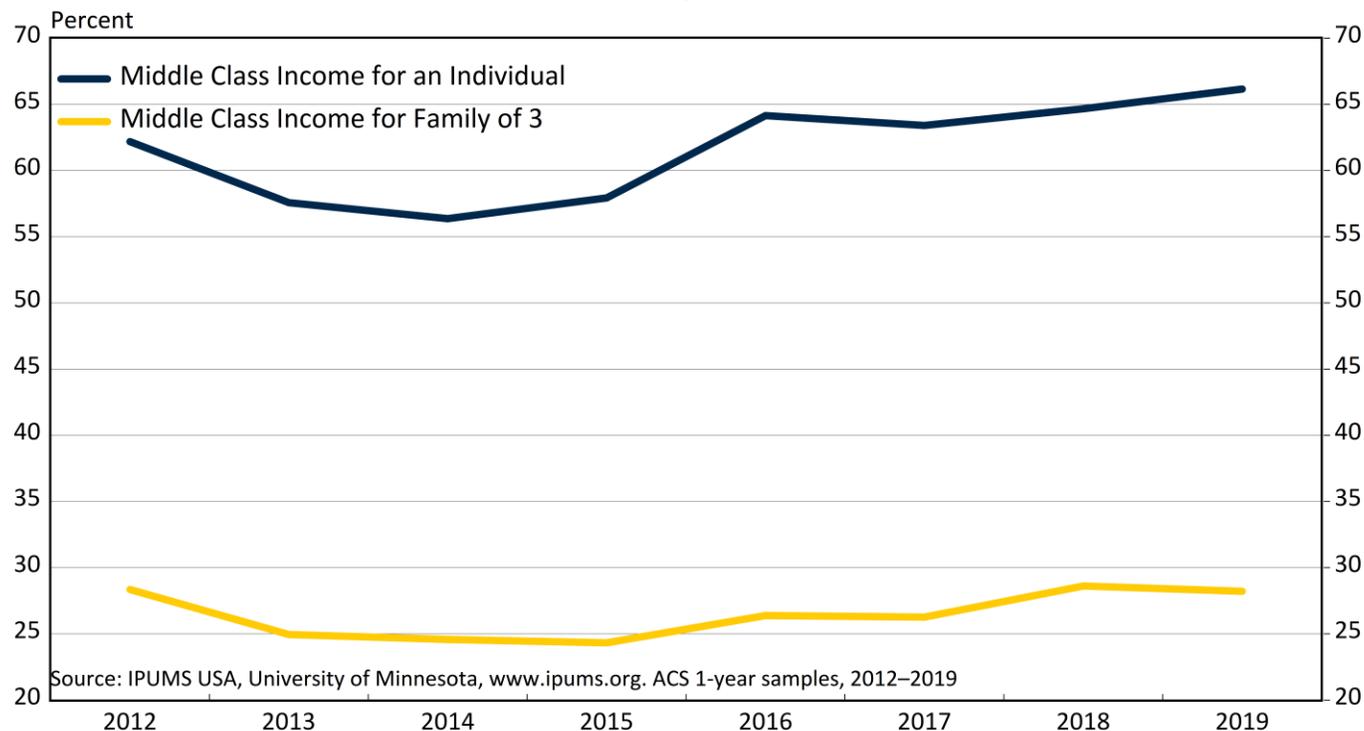
Inflation Rate, Detroit CPI



- This figure displays history and our forecast for local inflation, as measured by the Detroit Consumer Price index (CPI).
- This year’s rebound in energy prices, supply chain disruptions, and sharply higher input costs have pushed national inflation as measured by the Consumer Price Index for all Urban Consumers to 5.3 percent year-over-year in June, its highest level since 2008.
- We expect the Federal Reserve to allow inflation to run above 2 percent in the near term to “make up” for previous shortfalls. We nonetheless do not expect the Fed to allow inflation expectations to become unanchored or an inflationary spiral to develop.
- In the short run, we expect rapid growth and fiscal stimulus to drive labor and other input costs higher. We believe that production will eventually catch up to meet the additional demand, dampening the inflationary impulse.
- We are forecasting local inflation of 3.9 percent this year and 3.4 percent next year, in line with the high national inflation rates we anticipate.
- We expect local inflation to trail off to 2.6 percent per year in 2023–24 and to edge down to 2.5 percent per year in 2025–26.
- The local inflation rate we are forecasting for 2021 would be the highest since 1990, when local inflation registered 5.2 percent. Even the more moderate local inflation rates we are forecasting for 2023–26 are higher than we have been accustomed to recently: local inflation averaged 1.3 percent per year from 2009 through 2020.
- Taking a longer-run perspective, though, the inflation rates we are forecasting are not unusual. Detroit CPI inflation reached a series high of 15.8 percent in 1980. Local inflation averaged 2.8 percent per year from 1990 through 2008, which is higher than the level we forecast for 2023–26.
- The period following the Great Recession has been a period of very low inflation. We do expect inflation to pick up over the next two years, but historically speaking, the inflation rates we are forecasting are not unusual.

Figure 12

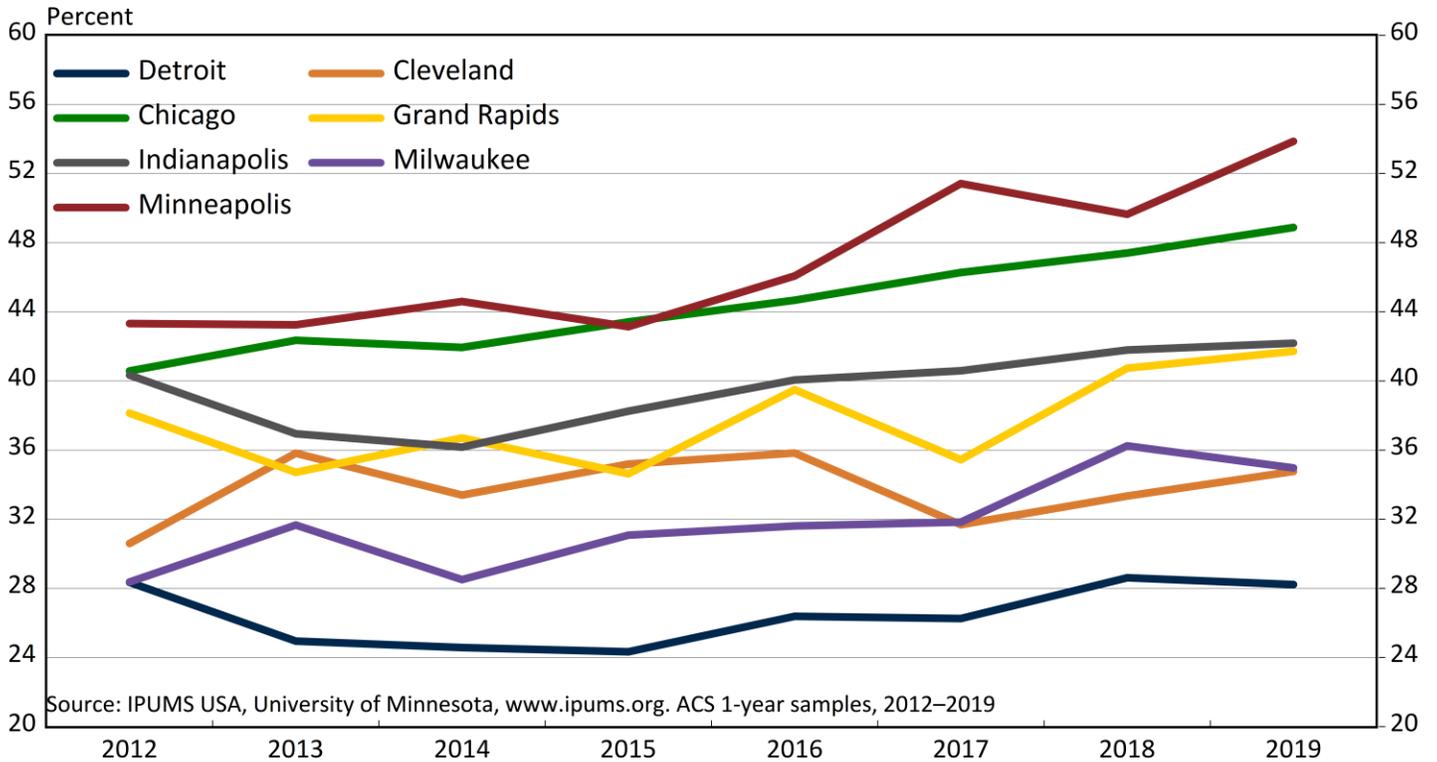
Full-time Detroit Workers Earning a 2019 Middle-Class Income



- Figure 12 shows the percent of full-time year-round workers in the City of Detroit earning incomes high enough to put an individual or family in the middle class. The yellow line shows the fraction of full-time year-round workers who earn enough income to support a middle-class family of three, and the blue line shows the fraction earning enough to put an individual in the middle class.
- These measures provide a snapshot of the earning opportunities available to Detroit residents. They do not account for workers in multi-income households or non-wage and salary income sources, but they do reflect how feasible it is for Detroit’s workers to support a middle-class family through full-time work.
- In 2019, 66 percent of full-time year-round Detroit workers earned enough to support a middle-class lifestyle for an individual. However, only 28 percent of workers earned enough to support a middle-class family of three in 2019.
- We define full-time year-round Detroit workers as city of Detroit residents who report working 50–52 weeks per year and typically work at least 35 hours per week. We refer to this group of residents as full-time Detroit workers in Figures 12–16.
- We define the national threshold for a middle-class income for a family of three in 2019 as \$52,325. This threshold is equal to two-thirds of the median national three-person equivalent household income, adjusting for local cost of living. For years prior to 2019, we adjust this threshold for inflation using the Personal Consumption Expenditure (PCE) price index.
- The national middle-class income threshold for an individual in 2019 is calculated similarly and comes to \$30,210. Further details on the cost of living and household size adjustments can be found in RSQE’s report for the Southeast Michigan Council of Governments: [Evaluating Shared Prosperity in Southeast Michigan, 2012–2018](#).
- Earned income includes wage and salary incomes plus business and farm incomes. This definition does not include social security, retirement, investment incomes, or transfer payments. The earned income of Detroit residents is adjusted by the local cost of living to be comparable to national values (in 2019, Detroit residents income was increased by 4.7 percent to reflect the lower cost of living in the Detroit metropolitan region).

Figure 13

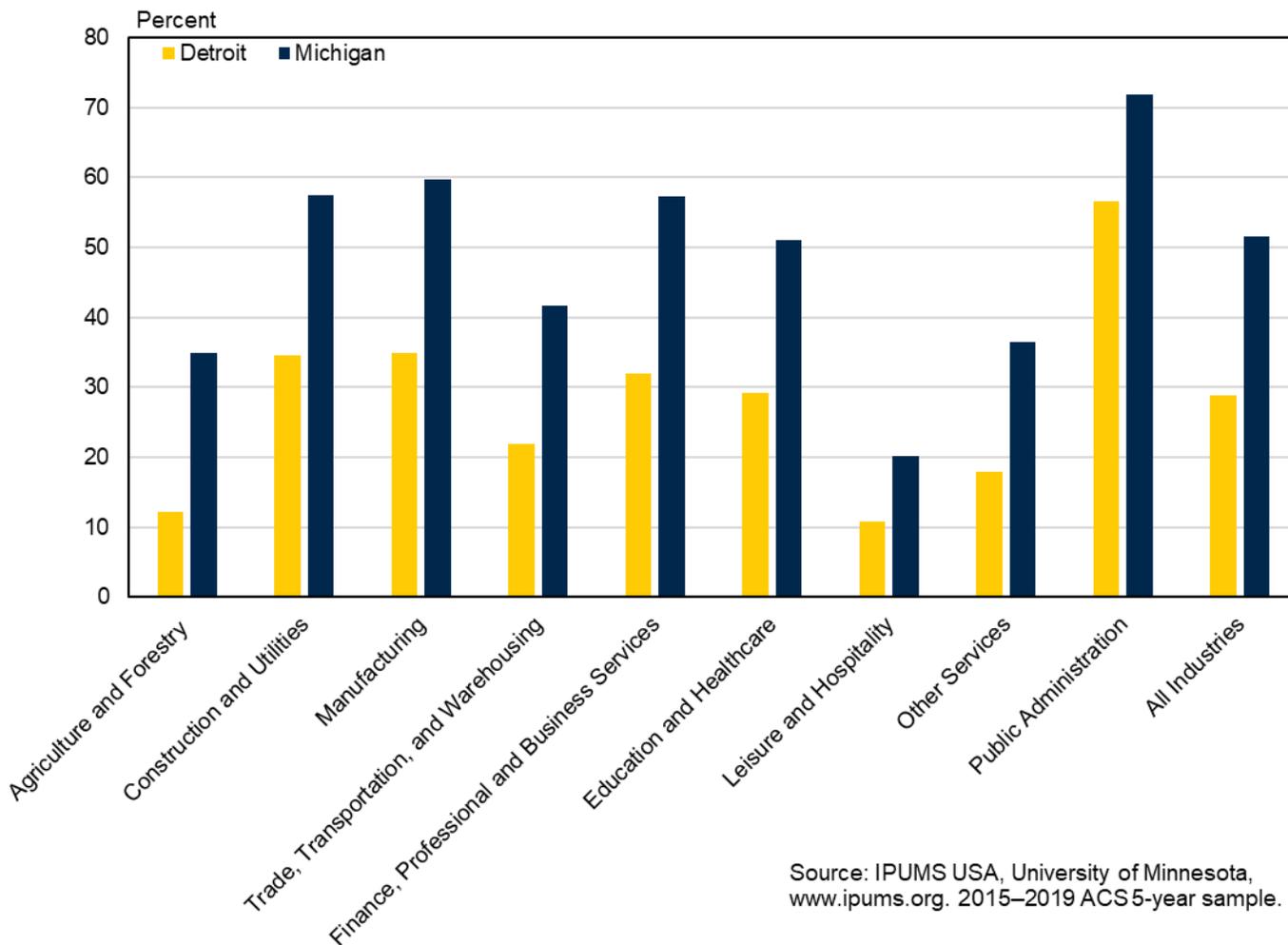
Workers Earning Middle-Class Family Incomes in Midwestern Cities



- Figure 13 shows the share of full-time year-round workers earning a high enough income to put a family of three in the middle class in select major Midwestern cities. The share of workers in Detroit who earn a middle-class family income is lower than in other cities in the Midwest.
- In 2019, only 28.3 percent of full-time year-round workers in Detroit earned enough to support a middle-class lifestyle for a family of three. The comparable share ranged from 6.6 percentage points higher in Cleveland to 25.6 percentage points higher in Minneapolis.
- Furthermore, the gap between Detroit and the more prosperous Midwestern cities has been widening since 2012. In 2012, the share of workers in Minneapolis earning middle-class incomes was 15 percentage points higher than in Detroit; in 2019, it was 25.6 percentage points higher. The shortfall compared to Chicago has widened from 12.2 percentage points in 2012 to 20.7 percentage points in 2019.
- Although the share of workers earning middle-class family incomes in Detroit has been lower than in other Midwest cities during the entire sample period, much of this shortfall first occurred prior to Detroit’s bankruptcy. Since 2015 the growth in the share of middle-class income earners has been closer to the growth in the other cities.
- The share of Detroit workers earning middle-class family incomes decreased from 28.3 percent in 2012 to 24.3 percent in 2015 before rebounding during the post-bankruptcy period to 28.2 percent in 2019.

Figure 14

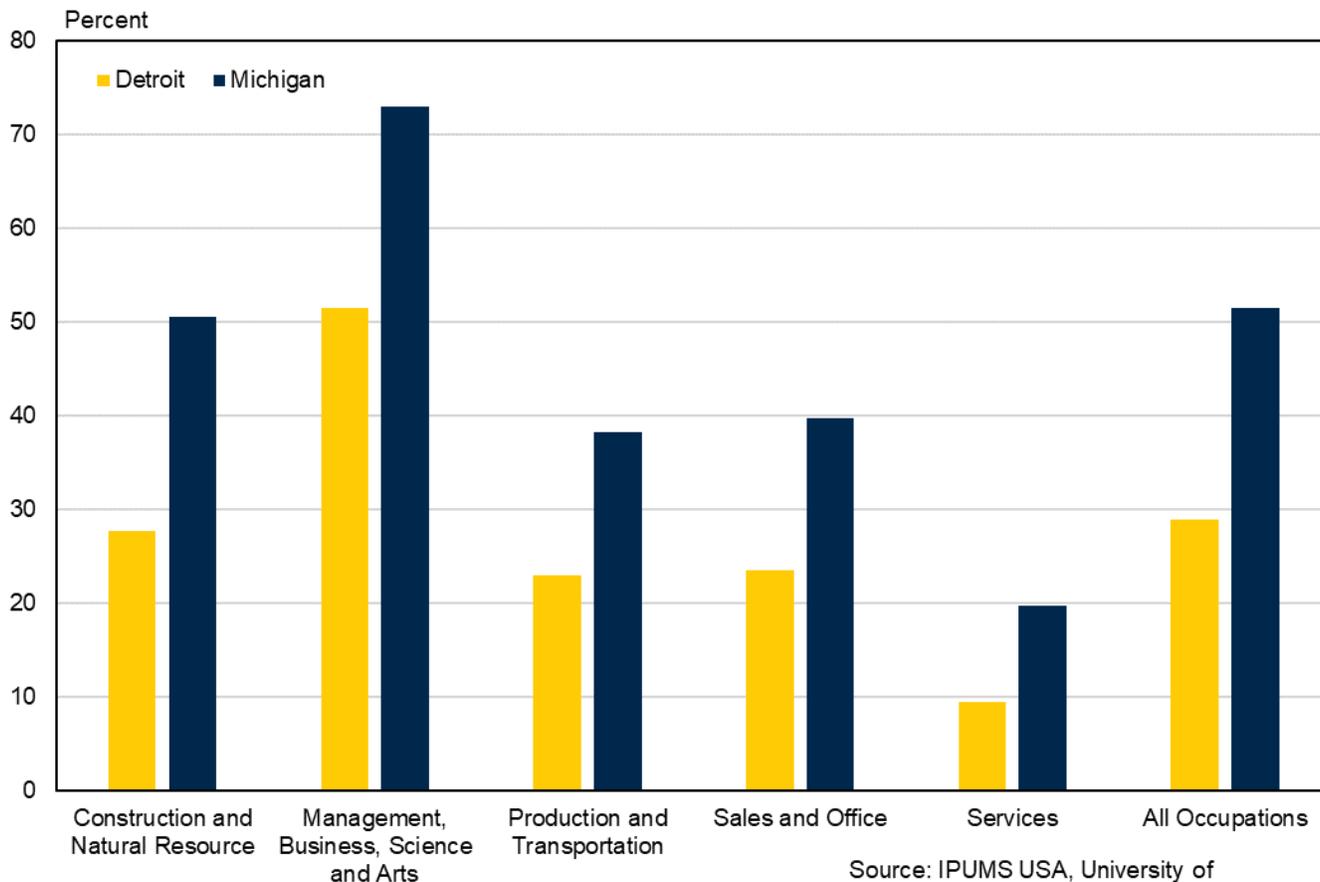
Workers Earning Middle-Class Family Incomes by Industry



- Figure 14 shows the share of full-time year-round workers in different industries with incomes high enough to support a family of three in the middle-class for both Detroit and the state of Michigan. Industries are grouped by their 1-digit North American Industry Classification System (NAICS) codes. In order to have a sufficiently large sample size, this figure shows data from the 5-year American Community Survey (ACS) sample for the years 2015–19, whereas Figures 12 and 13 show data from the 1-year ACS sample from 2019.
- The share of Detroit workers earning middle-class incomes varies dramatically across industries. Only 11 percent of full-time year-round workers in Leisure and Hospitality earned enough to support a middle-class household of three, while 57 percent of workers in public administration earned a middle-class income.
- The three industries that employed the most full-time year-round Detroit residents during this time were education and healthcare (34,000 workers), manufacturing (31,000 workers), and finance, professional and business services (29,000 workers). In all three industries, around 30 percent of Detroit workers earned middle-class incomes.
- In every industry, the share of Michigan workers earning middle-class incomes was higher than the share of Detroit workers. This difference ranged between 9 and 25 percentage points. Across all industries, 52 percent of Michigan full-time year-round workers earned middle-class incomes, compared to only 29 percent of Detroit workers.

Figure 15

Workers Earning Middle-Class Incomes by Occupation Group

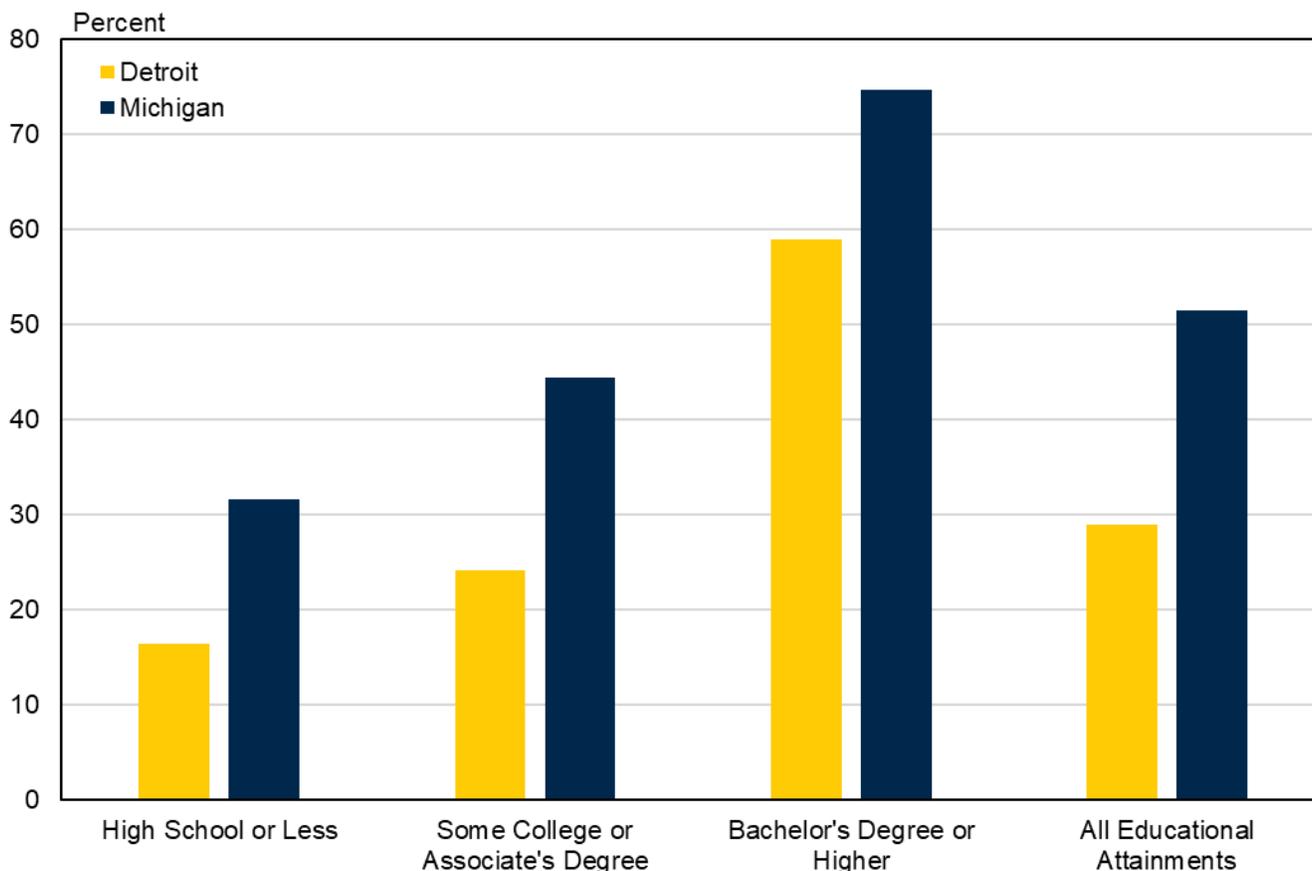


Source: IPUMS USA, University of Minnesota, www.ipums.org. 2015–2019 ACS 5-year sample.

- Figure 15 shows the share of full-time year-round workers who earned a middle-class income by their primary major occupation groups in the 2015–19 ACS 5-year sample. The primary occupation groups are classified according to the 2018 Census Occupation Codes.
- There are large differences across occupation groups, with 51 percent of Detroit workers in Management, Business, Science and Arts occupations earning middle-class incomes and only 10 percent of Detroit workers with Service occupations earning a middle-class income.
- Roughly 23 percent of workers both in Production and Transportation and in Sales and Office occupations earn middle-class incomes. The share of workers in Construction and Natural Resource Extraction occupations earning middle-class incomes is around five percentage points higher, at 28 percent.
- The share of workers earning middle-class incomes is higher in Michigan than in Detroit for every occupation group. The differences between occupations, however, are generally larger than the differences between geographies.
- The share of Management, Business, Science, and Arts workers earning middle-class incomes is 22 percentage points higher in Michigan than in Detroit. Nonetheless, the share of Detroit workers in those occupations remains higher than the share of Michigan workers earning middle-class incomes in any other occupation category.

Figure 16

Workers Earning Middle-Class Incomes by Educational Attainment



Source: IPUMS USA, University of Minnesota, www.ipums.org. 2015–2019 ACS 5-year sample.

- Figure 16 shows the share of workers earning middle-class incomes by educational attainment. In both Detroit and Michigan, workers with a bachelor's degree or higher are the most likely to earn middle-class incomes.
- In Detroit, 59 percent of full-time workers with a bachelor's degree or higher earn middle-class incomes. In contrast, only 24 percent of workers with an associate's degree or some college and 16 percent of workers with only a high school diploma or less education earn a middle-class income.
- The share of Michigan workers earning a middle-class income is between 15 and 20 percentage points higher than the share of Detroit workers for every educational attainment category.
- Overall, 29 percent of Detroit workers earn middle-class family incomes, compared to 52 percent of Michigan workers. That discrepancy reflects two factors: first, Michigan workers are more likely to earn middle-class incomes for a given level of education; and second, Michigan workers have higher educational attainment on average.
- In Detroit, 39 percent of full-time year-round workers have a high school diploma or less compared to 29 percent statewide. On the other hand, only 23 percent of Detroit's full-time workers have a bachelor's degree or higher, while 36 percent of Michigan workers do.

Table 1
City of Detroit Resident Income
Millions of Nominal Dollars (Annual Percent Changes in Parentheses)
Calendar Years

	Actual		Forecast						
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Total Resident Income*	11,615	13,315	13,270	13,550	13,144	13,772	14,327	14,948	15,624
	(3.6)	(14.6)	(-0.3)	(2.1)	(-3.0)	(4.8)	(4.0)	(4.3)	(4.5)
Wage and Salary Income	8,016	9,154	7,795	8,170	8,804	9,358	9,796	10,283	10,819
	(8.1)	(14.2)	(-14.8)	(4.8)	(7.8)	(6.3)	(4.7)	(5.0)	(5.2)
Transfer Income	1,769	1,771	1,854	1,880	1,907	1,946	1,986	2,026	2,067
	(-1.9)	(0.1)	(4.7)	(1.4)	(1.4)	(2.1)	(2.1)	(2.0)	(2.0)
Other Income	1,830	2,389	3,621	3,500	2,433	2,468	2,545	2,638	2,738
	(-7.9)	(30.6)	(51.5)	(-3.3)	(-30.5)	(1.4)	(3.1)	(3.7)	(3.8)
ADDENDA:									
Household Employment (ACS, Persons)	249,478	261,192	216,017	238,275	251,314	256,543	260,086	262,979	265,929
	(6.6)	(4.7)	(-17.3)	(10.3)	(5.5)	(2.1)	(1.4)	(1.1)	(1.1)
Average Household Wage (ACS, Dollars)	32,130	35,048	36,087	34,287	35,031	36,479	37,664	39,103	40,685
	(1.4)	(9.1)	(3.0)	(-5.0)	(2.2)	(4.1)	(3.2)	(3.8)	(4.0)
Total Resident Income in 2019\$	11,775	13,315	13,144	12,913	12,118	12,378	12,553	12,771	13,025
	(1.2)	(13.1)	(-1.3)	(-1.8)	(-6.2)	(2.1)	(1.4)	(1.7)	(2.0)
CPI, Detroit (1982–84=100)	232.3	235.5	237.7	247.1	255.4	262.0	268.7	275.6	282.5
	(2.4)	(1.4)	(1.0)	(3.9)	(3.4)	(2.6)	(2.6)	(2.5)	(2.5)

*Some federal income support may not be reported in the ACS as it would be in the National Income and Product Accounts as published by the BEA.

Table 2
City of Detroit Resident Income
Millions of Nominal Dollars (Annual Percent Changes in Parentheses)
Interpolated Fiscal Years (July 1–June 30)

	Actual		Forecast						
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Total Resident Income*	11,347	12,493	13,381	13,432	13,325	13,398	14,050	14,630	15,279
	(4.1)	(10.1)	(7.1)	(0.4)	(-0.8)	(0.5)	(4.9)	(4.1)	(4.4)
Wage and Salary Income	7,652	8,707	8,523	7,858	8,475	9,093	9,581	10,033	10,545
	(3.4)	(13.8)	(-2.1)	(-7.8)	(7.9)	(7.3)	(5.4)	(4.7)	(5.1)
Transfer Income	1,793	1,763	1,811	1,871	1,893	1,925	1,966	2,006	2,046
	(3.0)	(-1.7)	(2.7)	(3.3)	(1.2)	(1.7)	(2.1)	(2.0)	(2.0)
Other Income	1,901	2,023	3,048	3,704	2,957	2,379	2,503	2,590	2,688
	(8.0)	(6.4)	(50.6)	(21.5)	(-20.2)	(-19.5)	(5.2)	(3.5)	(3.8)
ADDENDA:									
Household Employment (ACS, Persons)	240,750	259,119	237,945	223,508	245,859	254,522	258,461	261,570	264,447
	(1.7)	(7.6)	(-8.2)	(-6.1)	(10.0)	(3.5)	(1.5)	(1.2)	(1.1)
Average Household Wage (ACS, Dollars)	31,785	33,603	35,818	35,158	34,473	35,727	37,071	38,358	39,876
	(1.7)	(5.7)	(6.6)	(-1.8)	(-1.9)	(3.6)	(3.8)	(3.5)	(4.0)
Total Resident Income in 2019\$	11,636	12,564	13,340	13,067	12,485	12,187	12,468	12,657	12,894
	(1.7)	(8.0)	(6.2)	(-2.0)	(-4.5)	(-2.4)	(2.3)	(1.5)	(1.9)
CPI, Detroit (1982–84=100)	229.8	233.2	236.6	241.8	252.1	258.7	265.3	272.2	279.0
	(2.3)	(1.5)	(1.4)	(2.2)	(4.3)	(2.6)	(2.6)	(2.6)	(2.5)

*Some federal income support may not be reported in the ACS as it would be in the National Income and Product Accounts as published by the BEA.

Table 3
Employment in the City of Detroit
Number of Jobs
Calendar Years

	Actual			Forecast					
	2018	2019	2020	2021	2022	2023	2024	2025	2026
TOTAL JOBS* (Number of jobs)	228,312	228,737	203,679	212,867	227,224	232,391	235,416	237,031	238,761
(Annual percentage change)	(0.4)	(0.2)	(-11.0)	(4.5)	(6.7)	(2.3)	(1.3)	(0.7)	(0.7)
GOODS-PRODUCING	28,836	27,395	22,718	27,011	32,154	33,047	33,090	33,246	33,697
Natural resources, and mining	578	614	599	602	608	612	616	619	622
Construction	6,895	6,357	5,725	6,344	7,278	7,503	7,151	6,928	6,975
Manufacturing	21,364	20,424	16,394	20,066	24,268	24,932	25,324	25,699	26,100
SERVICE-PROVIDING	199,476	201,343	180,961	185,855	195,069	199,344	202,326	203,786	205,064
Trade, transportation, and utilities	29,965	30,793	29,253	31,037	31,998	32,283	32,521	32,702	32,892
Retail trade	12,597	12,763	11,753	12,281	12,102	11,985	11,915	11,819	11,725
Trade, transportation, warehousing, and utilities	17,368	18,030	17,500	18,756	19,896	20,297	20,606	20,883	21,167
Information	3,585	3,252	2,540	2,500	2,478	2,399	2,318	2,236	2,157
Financial activities	6,465	8,893	6,792	6,948	7,283	7,671	7,798	7,921	8,044
Professional and business services	34,161	34,417	33,817	34,918	35,909	37,504	38,938	39,215	39,465
Professional, scientific, and technical	13,489	12,950	12,687	13,254	13,558	14,217	14,815	14,868	14,908
Management of companies and enterprises	11,260	11,539	11,290	11,814	12,153	12,878	13,535	13,668	13,795
Administrative support and waste management	9,412	9,928	9,840	9,849	10,198	10,410	10,588	10,679	10,762
Education and health services	71,181	70,368	67,143	67,115	69,339	70,048	70,263	70,311	70,239
Leisure and hospitality	27,385	26,722	16,136	17,579	21,168	22,398	23,449	24,397	25,316
Other services	7,346	6,919	5,655	6,105	6,479	6,471	6,445	6,407	6,367
Public Administration	19,167	19,727	19,358	19,399	20,152	20,300	20,320	20,323	20,310
Unallocated services	221	251	267	255	264	269	272	273	274
ADDENDA:									
Household Employment (BLS)**	227,635	230,416	206,116	222,114	229,705	233,526	236,554	238,334	240,939
(Annual percentage change)	(1.1)	(1.2)	(-10.5)	(7.8)	(3.4)	(1.7)	(1.3)	(0.8)	(1.1)
Unemployment Rate**	9.1	9.0	22.1	9.5	8.7	8.0	7.5	7.2	6.9

*Actual data through calendar 2020q3

**Actual data through calendar 2021q1

Table 4
Employment in the City of Detroit
Number of Jobs
Fiscal Years (July 1–June 30)

	Actual			Forecast					
	2018	2019	2020	2021	2022	2023	2024	2025	2026
TOTAL JOBS* (Number of jobs)	228,496	228,570	217,337	204,110	222,111	229,957	234,321	236,152	237,911
(Annual percentage change)	(1.3)	(0.0)	(-4.9)	(-6.1)	(8.8)	(3.5)	(1.9)	(0.8)	(0.7)
GOODS-PRODUCING	28,408	28,499	24,147	24,261	30,542	32,697	33,187	33,071	33,460
Natural resources, and mining	569	589	627	589	605	610	614	617	621
Construction	6,866	6,603	5,948	5,957	6,911	7,425	7,426	6,952	6,950
Manufacturing	20,973	21,306	17,572	17,715	23,026	24,663	25,147	25,502	25,889
SERVICE-PROVIDING	200,088	200,072	193,189	179,849	191,569	197,259	201,134	203,081	204,451
Trade, transportation, and utilities	29,885	30,304	30,070	30,076	31,638	32,133	32,414	32,613	32,793
Retail trade	12,621	12,657	12,214	12,090	12,229	12,014	11,954	11,869	11,771
Trade, transportation, warehousing, and utilities	17,264	17,647	17,856	17,985	19,409	20,119	20,460	20,744	21,022
Information	3,892	3,262	2,977	2,453	2,511	2,439	2,359	2,276	2,196
Financial activities	6,395	7,643	7,923	6,783	7,083	7,529	7,735	7,860	7,982
Professional and business services	33,852	34,320	34,357	34,065	35,459	36,539	38,446	39,085	39,340
Professional, scientific, and technical	13,520	13,288	12,823	12,871	13,423	13,802	14,622	14,845	14,888
Management of companies and enterprises	11,063	11,457	11,352	11,565	11,991	12,429	13,312	13,603	13,731
Administrative support and waste management	9,270	9,575	10,182	9,628	10,046	10,308	10,512	10,637	10,720
Education and health services	71,786	70,772	69,206	66,340	68,339	69,803	70,189	70,297	70,302
Leisure and hospitality	27,424	27,094	22,331	15,047	19,986	21,810	22,944	23,928	24,857
Other services	7,489	7,044	6,314	5,710	6,426	6,477	6,460	6,427	6,387
Public Administration	19,129	19,412	19,729	19,124	19,866	20,263	20,315	20,322	20,320
Unallocated services	235	221	282	250	260	267	271	273	274
ADDENDA:									
Household Employment (BLS)**	226,451	229,568	216,094	213,538	227,646	231,530	235,399	237,371	239,600
(Annual percentage change)	(1.5)	(1.4)	(-5.9)	(-1.2)	(6.6)	(1.7)	(1.7)	(0.8)	(0.9)
Unemployment Rate**	9.4	9.1	15.9	15.5	9.0	8.3	7.7	7.3	7.0

*Actual data through calendar 2020q3

**Actual data through calendar 2021q1

Table 5
Average Wage by Industry in the City of Detroit
Dollars
Calendar Years

	Actual			Forecast					
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Average Wage* (Dollars)	65,825	66,778	73,019	73,175	74,636	77,039	78,910	80,899	82,965
(Annual percentage change)	(2.3)	(1.4)	(9.3)	(0.2)	(2.0)	(3.2)	(2.4)	(2.5)	(2.6)
GOODS-PRODUCING	69,199	69,304	73,564	70,476	70,543	71,414	71,168	71,830	72,717
Natural resources, and mining	79,119	83,991	80,845	87,635	90,802	94,082	97,481	101,003	104,652
Construction	80,633	83,586	84,961	84,860	86,707	89,744	91,928	94,859	98,222
Manufacturing	65,240	64,417	69,318	65,414	65,188	65,341	64,667	64,920	65,140
SERVICE-PROVIDING	65,337	66,434	72,951	73,568	75,310	77,972	80,176	82,379	84,649
Trade, transportation, and utilities	54,813	54,888	57,709	59,629	61,368	63,392	65,309	67,477	69,818
Retail trade	28,450	28,826	31,951	32,017	30,471	30,363	30,597	30,979	31,435
Trade, transportation, warehousing, and utilities	73,935	73,336	75,010	77,710	80,163	82,895	85,381	88,133	91,081
Information	85,317	85,273	107,683	92,036	94,347	97,936	99,805	102,872	106,285
Financial activities	84,889	80,528	92,212	87,897	91,801	95,832	98,424	102,593	106,929
Professional and business services	104,688	107,682	116,617	111,976	115,246	119,957	122,942	126,538	130,200
Professional, scientific, and technical	99,947	101,217	106,471	104,910	107,674	111,139	113,721	117,188	120,919
Management of companies and enterprises	153,084	160,848	177,899	161,992	167,142	173,484	176,014	180,451	184,601
Administrative support and waste management	53,586	54,325	59,384	61,490	63,470	65,782	67,998	70,555	73,320
Education and health services	59,594	61,281	64,826	67,988	70,068	71,956	73,710	75,346	76,872
Leisure and hospitality	37,709	37,957	36,835	42,251	44,480	46,093	47,438	48,727	50,178
Other services	40,812	43,984	50,596	46,090	45,516	46,424	47,398	48,424	49,600
Public Administration	71,966	68,301	73,737	76,033	78,448	80,943	83,790	86,924	90,364
Unallocated services	27,554	31,900	34,437	36,860	39,932	42,220	44,447	46,757	49,181

*Actual data through calendar 2020q3

Table 6
Average Wage by Industry in the City of Detroit
Dollars
Fiscal Years (July 1–June 30)

	Actual			Forecast					
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Average Wage* (Dollars)	64,964	66,115	69,675	73,519	73,600	75,741	78,096	79,884	81,917
(Annual percentage change)	(1.1)	(1.8)	(5.4)	(5.5)	(0.1)	(2.9)	(3.1)	(2.3)	(2.5)
GOODS-PRODUCING	68,108	68,247	71,626	72,980	70,044	70,886	71,443	71,417	72,256
Natural resources, and mining	76,642	83,164	80,987	85,254	89,206	92,427	95,766	99,226	102,811
Construction	79,738	82,711	82,429	86,984	85,168	88,122	90,980	93,308	96,487
Manufacturing	64,069	63,352	67,635	67,863	65,002	65,165	65,081	64,777	65,018
SERVICE-PROVIDING	63,816	64,517	65,811	69,431	73,591	74,167	76,545	79,193	81,262
Trade, transportation, and utilities	53,777	54,871	55,705	59,203	60,317	62,352	64,374	66,366	68,621
Retail trade	28,378	28,408	29,784	33,002	30,928	30,325	30,468	30,775	31,200
Trade, transportation, warehousing, and utilities	72,346	73,850	73,435	76,816	78,834	81,478	84,184	86,730	89,575
Information	84,103	84,696	100,134	95,476	92,186	96,050	99,100	101,233	104,541
Financial activities	82,635	81,861	84,308	91,091	89,272	93,653	97,256	100,483	104,696
Professional and business services	105,408	106,587	113,200	113,118	113,048	117,347	121,761	124,702	128,338
Professional, scientific, and technical	97,719	100,636	104,360	105,387	105,914	109,288	112,541	115,407	119,003
Management of companies and enterprises	157,808	157,317	174,581	165,060	163,510	170,058	175,208	178,211	182,514
Administrative support and waste management	54,083	54,145	55,896	61,063	62,350	64,580	66,905	69,247	71,907
Education and health services	58,147	60,151	62,705	66,821	69,063	71,030	72,848	74,542	76,122
Leisure and hospitality	38,303	37,913	37,178	39,798	43,498	45,319	46,806	48,061	49,435
Other services	39,721	42,661	47,370	48,497	45,397	45,912	46,936	47,886	48,998
Public Administration	70,538	69,717	71,163	74,880	77,345	79,639	82,328	85,321	88,603
Unallocated services	27,777	27,626	35,952	34,234	38,597	41,104	43,327	45,589	47,954

*Actual data through calendar 2020q3