Income Tax Forecast

FY2020-2026

city of CINCINNATI

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HIGHLIGHTS OF KEY FINDINGS

- Aggregate net income tax revenues are projected to grow at 0.43 percent annually on average from FY 2020 through FY 2026. However, the compound annual average growth rate for collections from 2021 through 2026 is expected to be higher at 1.34 percent, or -0.66 percent real growth when controlling for inflation.

- When isolating near-term job growth, the City of Cincinnati is expected to grow at a rate of 1.4 percent from 2021-2026 compared to 4.8 percent nationally. Similarly, much of the job growth in the Cincinnati Metropolitan Statistical Area (Cincinnati, OH-KY-IN) is expected to occur outside of the City of Cincinnati.[1]
- COVID-19 related tax refund liability is variable throughout 2021 and 2026. The Economics Center estimates that taxable earnings (withholding and individual) are at risk for approximately 40 to 50 percent of taxable collections in 2021 and between 2022 and 2026 this risk is estimated to be approximately 16.4 to 24.0 percent due to a portion of workers in the City returning to the office but some also maintaining a hybrid work environment. The timing of these refunds, however, is variable and potentially still undetermined. The FY2021 refunds are therefore treated as liabilities and not "reductions" in collections in the year in which they are levied or are accrued whereas moving forward they may be considered a reduction or foregone future income.

[1] Emsi

EXECUTIVE SUMMARY

To assist the City of Cincinnati in planning, the Economics Center has completed an updated six-year forecast of net income tax revenues and components. Estimates for the net income tax forecast and general fund estimates for the period of FY 2020- FY 2026 appear in Table ES-1.

Aggregate net income tax revenues are projected to grow at 0.43 percent annually on average from FY 2020 through FY 2026[2]. However, the estimated compound annual growth rate for 2021-2026 is expected to be approximately 1.34 percent, or -0.66 percent real growth when controlling for inflation. While any individual year may deviate from this annual average, realized net revenue growth may be slightly lower or higher, on average the year-over-year growth is anticipated to approximate this annual average compound rate. Inflation is projected to be 2.0 percent over this time period according to the Federal Reserve Bank.[3] The real growth rate includes inflation and is used to better understand future net revenues when taking into account costs of goods and services.

Table ES-1: Net Income Tax Revenue Forecast, FY 2021 - FY 2026

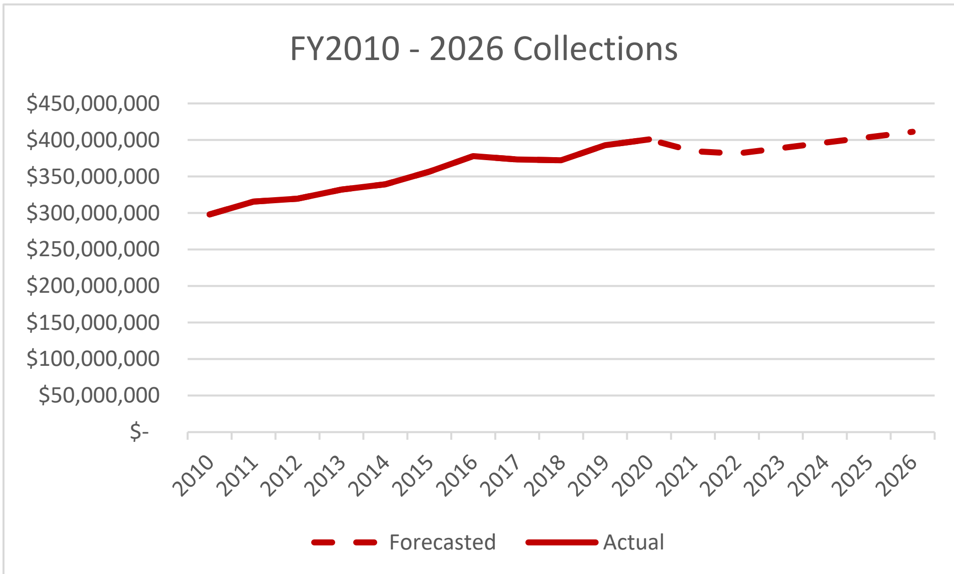
Fiscal Year	Income Tax Net Revenues ($M)	Net Revenues Growth Rate	General Fund ($M)	General Fund Growth Rate
2020[4]	$400.74		$295.79	
2021[5]	$384.73	-4.00%	$319.46	8.00%
2022	$381.46	-0.85%	$328.48	2.82%
2023	$388.88	1.95%	$334.86	1.95%
2024	$396.30	1.91%	$341.25	1.91%
2025	$403.72	1.87%	$347.64	1.87%
2026	$411.14	1.84%	$354.03	1.84%
Average	*Compound Annual Growth Rate* (2020-2026)*	*0.43%*		*3.04%*

Source: Economics Center model results and calculations.
*compound average annual rate

Figures ES-1 and ES-2 show the estimated collections and general fund actuals and forecasts between 2010 and 2026. A key difference between forecasted collections and general fund is that the net tax collections are expected to have a slight downturn in 2021 and 2022 whereas collections are expected to see consistent, albeit slow, growth through 2026.

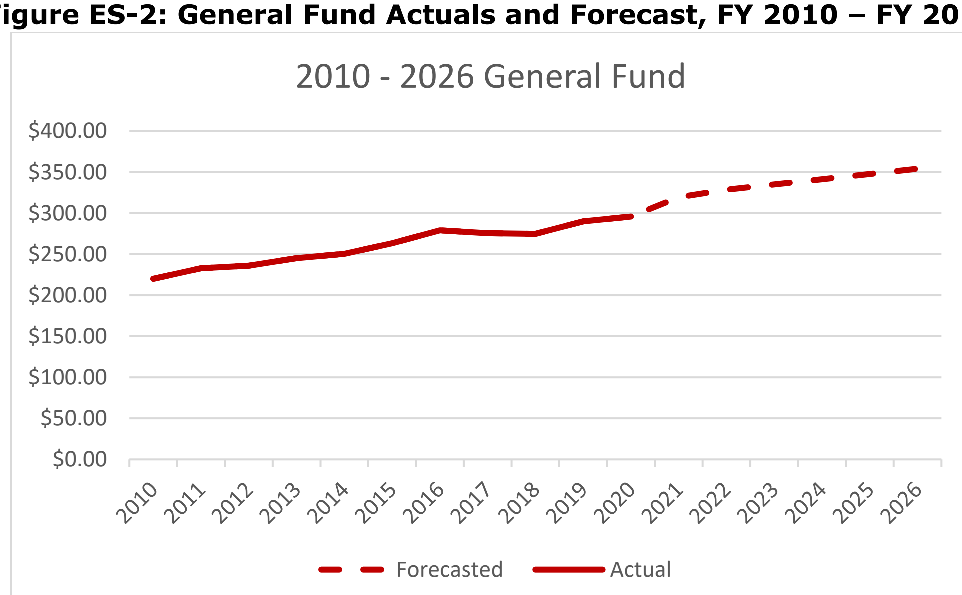
[2] Compound annual growth rate (2020-2026). Compound annual growth rates can be thought of as an average amount of growth when looking over a time series with multiple years. It is applied to an initial amount of money for each year.
[3] Federal Reserve Bank, Table 1. Economic Projections of Federal Reserve Board Members and Federal Reserve Bank Presidents Under Their Individual Assumptions of Projected Appropriate Monetary Policy, March 2021
[4] $13.1 million was collected in 2021 but levied in 2020.
[5] This analysis includes adjustments for the earnings tax rate change of 2.1 percent to 1.8 percent effective 10/2/2021.

Figure ES-1: Net Tax Collection Forecasts, FY 2010 – FY 2026



Source: Economics Center model results and calculations.

Figure ES-2: General Fund Actuals and Forecast, FY 2010 – FY 2026



The forecast provides directionality of how the economy is expected to recover through 2026. There are many factors that could affect future growth patterns, most notably the federal stimulus act that will provide more than $290 million to the City of Cincinnati.

INTRODUCTION

To assist the City of Cincinnati in planning and projections, the Economics Center estimated a six-year forecast of net income tax revenues and major components for the period of fiscal year (FY) 2021 to FY 2026. In 2013 the City of Cincinnati adjusted its accounting schedule from calendar year to a July-June fiscal year. All estimates presented in this report are for a July-June fiscal year, including historical data.

To prepare the forecast, the Economics Center analyzed historical tax revenue trends for the City of Cincinnati, as well as information on tax incentive payments and additional transfers of funds. This information was combined with data on national economic trends to develop the forecast projections. The Economics Center also examined data on regional industry employment and wages for the City. This analysis identified significant industry sectors influencing the local economy and illustrates the benefits to the local economy from its relatively diverse commercial base. While the City's economy is subject to national trends affecting its most significant industries, the diverse commercial base allows declines in one sector to be offset by growth in another.

Tax Revenue Trends

In FY2020 the City of Cincinnati received approximately $400.74 million in net income tax revenues. The City has had variable growth patterns from 2004 to 2020 ranging from -3.69 percent decline during the Great Recession to higher levels of growth exceeding 6 percent. The compound annual average growth rate from 2004 to 2020 was approximately 3.0 percent. The growth from 2015 to 2020 was approximately 3.3 percent annual, with most of the earnings in 2015 and 2016 as well as 2019 and 2020.

Table 1: Net Income Tax Revenues, FY 2004 - FY 2020*

Fiscal Year	Total Net Revenues ($M)	Growth Rate
2004	$257.71	
2005	$275.22	6.79%
2006	$292.22	6.18%
2007	$305.11	4.41%
2008	$318.91	4.52%
2009	$307.15	-3.69%
2010	$298.03	-2.97%
2011	$315.59	5.89%
2012	$319.64	1.29%
2013	$332.03	3.88%
2014	$339.24	2.17%
2015	$356.60	5.12%
2016	$377.93	5.98%
2017	$373.30	-1.23%
2018	$372.11	-0.32%
2019	$392.75	5.55%

2020[6]	$400.74	5.37%

Source: Economics Center calculations

Compound annual average growth rates are used to better explain the trend of growth. For example, a compound annual average growth rate is the calculated rate of growth that, if applied annually, will sum to the correct amount over time. It provides a relative smoothness to understand on average how much growth occurs per year over a series of many years. However, the decrease in revenues in 2017 caused a slight decrease in the average growth rate. As a result, a linear extrapolation of the nominal growth rate indicates continued growth, but at a slower pace than in prior years. After adjusting for inflation, there has not been significant long-term growth in income tax revenues as the longest post-recession growth period was the two-year period in fiscal years 2015 and 2016.

FORECAST

To forecast net income tax revenues for the six-year horizon, FY 2021 through FY 2026, the Economics Center analyzed historical patterns for total net revenues and its components.

Table 2 shows the estimated forecasted net income tax as well as general fund rates for 2020-2026.

Table 2: Forecasted Net Income Tax Revenue and General Fund FY 2020 - FY 2026

Fiscal Year	Collections ($M)	Growth Rate	General Fund ($M)	Growth Rate (GF)	Real Growth Rate (GF)
2020	$400.74		$295.79		
2021	$384.73	-4.00%	$319.46	8.00%	6.00%
2022	$381.46	-0.85%	$328.48	2.82%	0.82%
2023	$388.88	1.95%	$334.86	1.95%	-0.05%
2024	$396.30	1.91%	$341.25	1.91%	-0.09%
2025	$403.72	1.87%	$347.64	1.87%	-0.13%
2026	$411.14	1.84%	$354.03	1.84%	-0.16%
Average	Compound Annual Growth Rates* (2020-2026)	0.43%		3.04%	1.04%

Source: Economics Center model results and calculations. US inflation projection calculated from NECC forecast.
*compound annual average rate

Figures 1 and 2 below shows both the net tax collections and the general fund actuals from 2010-2020 and the forecasted values for the remainder of 2021 through 2026. While the net tax collections values experience a downturn following 2020 through 2022 and then a return to slight increases through 2026, the forecast shows that the general fund is expected to continue increasing, albeit at a slower rate than historically seen. As noted previously, the injection of PPP money and other federal stimulus dollars could result in faster than expected growth moving forward.

[6] $13.1 million was collected in 2021 but levied in 2020.

Figure 1: Net Tax Collections Forecast, FY 2010 - FY 2026

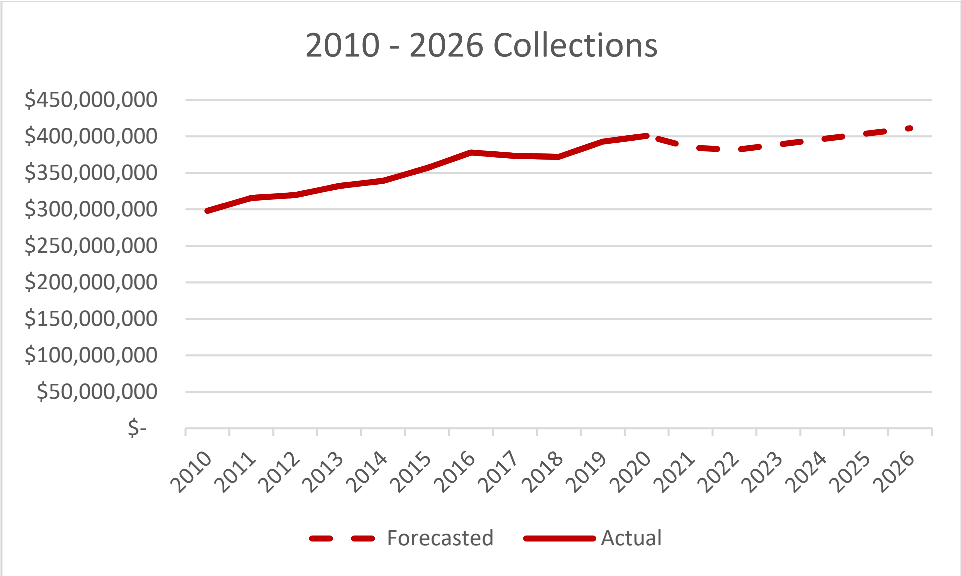
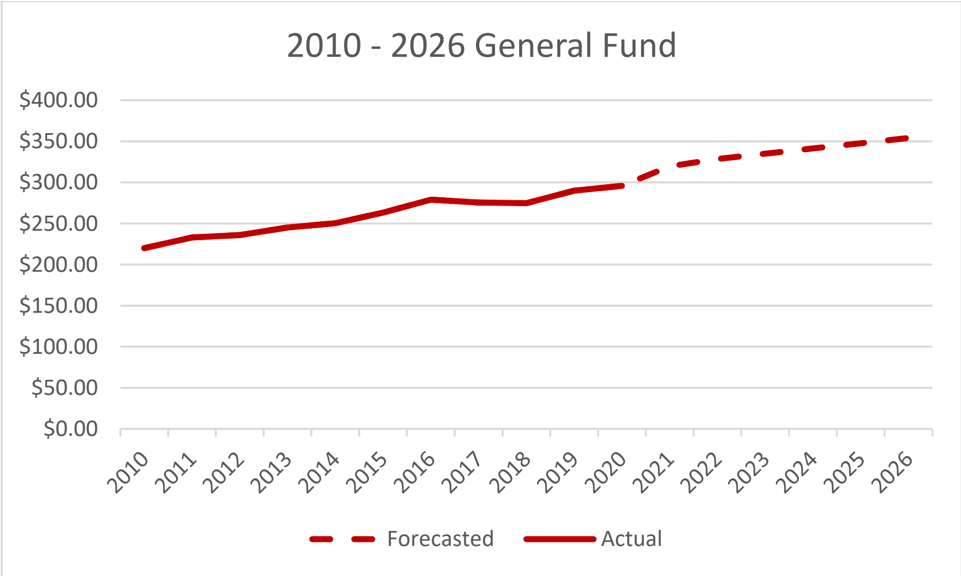


Figure 2: General Fund Forecast, FY 2010 - FY 2026



Additionally, the Economics Center analyzed the potential impacts of refunds due to increased levels of work from home and hybrid work environments. Fiscal year 2021 is expected to be impacted at a higher rate of telework earnings tax refund than years 2022-2026. This is due to the mandated quarantine in the Spring and into the Summer of calendar year 2020. As of April 2021, many companies are still operating as a hybrid environment. It is also important to note that individuals whom were able to telework likely had higher taxable earnings than occupations in such industries as food service, accommodations, or retail.

Based on national and local research, it is expected that approximately 40 to 50 percent of individual and withholding tax collections could be at risk of potentially needing to be refunded from collections in FY2021.

This risk is expected to taper down to approximately 16.4 to 24.0 percent for years 2022-2026. However, many factors ranging from individual company policies to the national vaccine rollout could affect these estimates. The range of 16.4 to 24.0 of risk is based on a number of national surveys and estimates that were localized to match the industrial make-up of the City of Cincinnati. These estimates provide the amount of potential "foregone" collections that the City may have historically projected.

Table 3: Forecasted Adjusted Collections and Growth Rates FY 2021 - FY 2026

Fiscal Year	Forecasted General Fund ($M)	Risk Adj. Lower Bound ($M)	Risk Adj. Upper Bound ($M)
2022	$328.48	$259.10	$281.07
2023	$334.86	$264.14	$286.54
2024	$341.25	$269.18	$292.00
2025	$347.64	$274.22	$297.47
2026	$354.03	$279.26	$302.94

ECONOMIC CONDITIONS

Regional Demographic Characteristics

Population within the City of Cincinnati is expected to grow at a rate of 0.85 percent from 2019-2026, a nominal increase of 2,600 net new residents, compared to 2.82 percent nationally, as shown in Table 4. Much of the population growth expected to occur in the Cincinnati MSA will take place outside of the City of Cincinnati. The Cincinnati MSA is projected to grow by approximately 44,000 net new residents over this period, or at a rate of 1.97 percent, while the State of Ohio is estimated to remain relatively flat at 0.68 percent growth.

Table 4: Projected Population Growth, 2019 – 2026

Region	Population		Growth Rate
	2019	2026	
City of Cincinnati	301,394	303,953	0.85%
Cincinnati MSA	2,221,208	2,264,953	1.97%
State of Ohio	11,689,100	11,768,710	0.68%
United States	328,239,523	337,491,691	2.82%

Source: 2019 ACS Baseline, Emsi, Q1 2021 (calendar year) Data Set growth rates

As shown in Table 5, The City of Cincinnati has a labor force participation rate of 63.0 percent, which is approximately four percentage points stronger than the national rate of 58.9 percent and the State of Ohio's rate of 58.7 percent. The rate of labor force participation in the Cincinnati MSA of 62.8 percent mirrors that of the City. Unemployment in the City of Cincinnati is at 5.0 percent, which lower than both the national rate of 5.2 percent and the State of Ohio at 5.2 percent.

Table 5: Labor Force Characteristics

Region	Labor Force Participation Rate	Unemployment Rate
City of Cincinnati	63.0%	5.0%
Cincinnati MSA	62.8%	4.7%
State of Ohio	58.7%	5.2%
United States	58.9%	5.2%

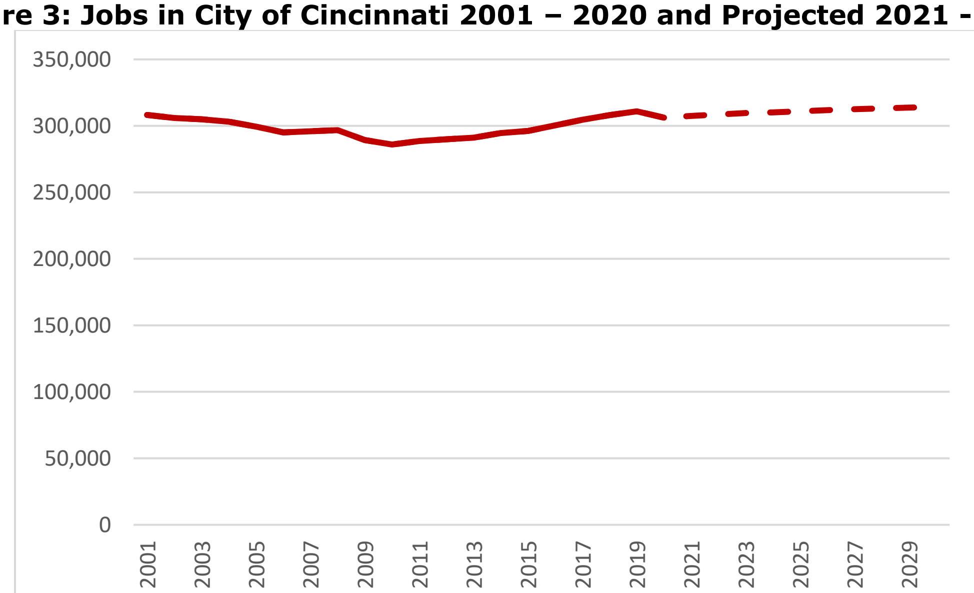
Source: Emsi Q1 2021 Data Set

Regional Employment Characteristics

Employment and wage data for the City illustrate key industries which are main drivers of earnings, and thus income tax revenues, locally. National conditions for these industries are likely to affect local performance.

Figure 3 shows the number of jobs in Cincinnati from 2001-2020 and estimates moving forward to 2030. While the Great Recession increased the rate at which jobs were leaving the City, Cincinnati experienced steady job decline from 2001 to 2010. Since 2010, there has been moderate recovery. Based on the Emsi estimates, the City of Cincinnati's total job count is expected to remain relatively flat through 2030 with a 2021-2030 growth rate of approximately 2 percent.

Figure 3: Jobs in City of Cincinnati 2001 – 2020 and Projected 2021 - 2030



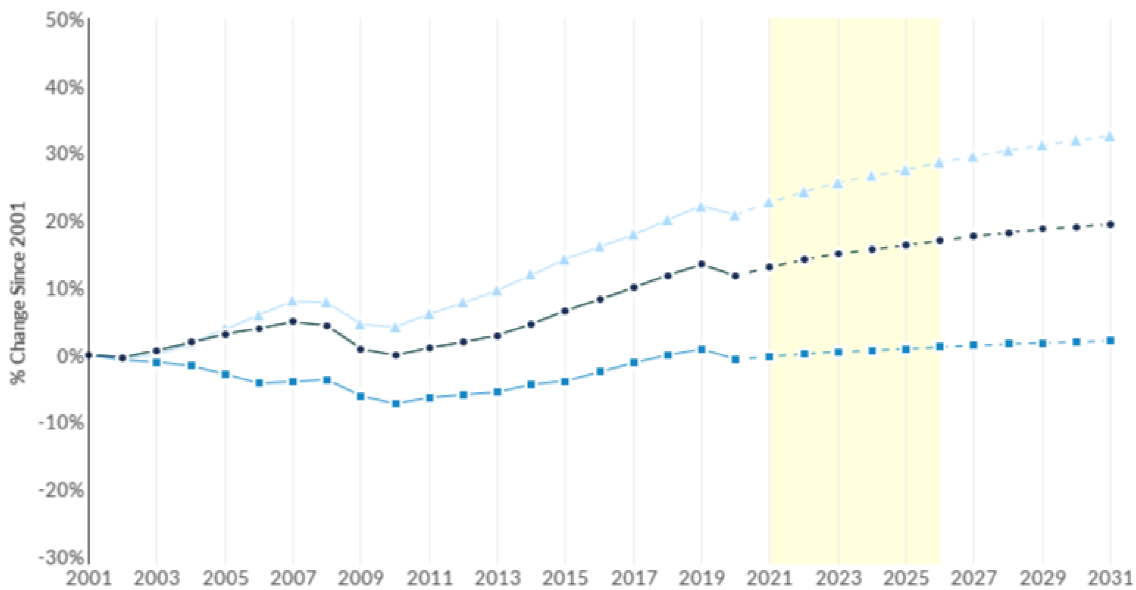
Source: EMSI Data for Cincinnati, Ohio

Additionally, it is notable when comparing the City of Cincinnati to the MSA, Hamilton County, State of Ohio, and nationally, the City has very limited growth in the number of jobs, as shown in Figure 4. When isolating near-term job growth, the City of Cincinnati is expected to grow 1.0 percent from 2021-2026 compared to 5.0 percent nationally.

Similarly, much of the job growth in the Cincinnati Metropolitan Statistical Area (Cincinnati, OH-KY-IN) is expected to occur outside of the City of Cincinnati in neighboring jurisdictions.

Figure 4: Jobs by Region, Projected 2021 – 2026

Industry Change Summary



	Region	2021 Jobs	2026 Jobs	Change	% Change	2020 Averag Earning
●	Cincinnati, OH-KY-IN	1,383,257	1,431,285	48,028	3%	$62,36
■	City of Cincinnati	307,462	311,796	4,334	1%	$71,72
▲	United States	205,615,210	215,541,672	9,926,462	5%	$63,55

Source: EMSI

The types of jobs within the City of Cincinnati's economy have also changed since 2001. Table 6 shows the top five industries in 2001 and 2020 as well as projected in 2030. Health Care and Social Assistance is consistently the top industry for employment in all three years. It also accounts for approximately 15 percent of jobs in 2001 and increases to an estimated 21 percent of jobs in 2028. The top five industries represent 51 percent, 53 percent, and 55 percent of all jobs in all industries in 2001, 2018, and 2028 respectively.

While manufacturing was the second largest employer in 2001, it dropped off of the top-5 list to sixth in 2020. In 2020, the second through fourth rank includes: Professional, Scientific, and Technical Services; Finance and Insurance; Government; and Accommodation and Food Services.

Estimated 2030 industry composition for the top-five matches the 2020 ranking except that Finance and Insurance is projected to surpass Professional, Scientific, and Technical Services in terms of jobs. Between 2020 and 2030, Management of Companies and Enterprises is expected to shed approximately 2,300 jobs in the City of Cincinnati. This is notable because the average earnings per job in the Management of Companies and Enterprises industry is the highest average wage of all industries in the City of Cincinnati at

$140,199 in 2020. Finance and Insurance is estimated to add 3,016 net new jobs in the City with average earnings per job $97,590 (2020$) and is projected to become the second largest industry in the City in terms of number of jobs in 2030. This projected job change in Management of Companies and Enterprises and associated wages and the net new jobs added in Finance and Insurance will result in net total payroll losses of approximately $31.1 million in the City.

Manufacturing is expected to lose more than 12,300 jobs from 2001 to 2030. This is also notable because the average wages associated with Accommodation and Food Services are substantially lower than all other industries.

Additionally, the number of jobs within these industries come from a varied industrial mix, some being non-profit, education, government, and banks. Many of the businesses in these industries may not be required to file a net profit tax return, which reduce the business' potential contributions to the City's gross revenues.

Table 6: Top Five Industries, 2001, 2020, and 2030 Projected

2001		2020		2030	
Industry	**Jobs**	**Industry**	**Jobs**	**Industry**	**Jobs**
Health Care and Social Assistance	41,498	Health Care and Social Assistance	54,595	Health Care and Social Assistance	59,341
Manufacturing	29,070	Professional, Scientific, and Technical Services	26,543	Finance and Insurance	28,145
Government	28,425	Finance and Insurance	25,129	Professional, Scientific, and Technical Services	27,500
Professional, Scientific, and Technical Services	23,232	Government	24,539	Government	24,515
Management of Companies and Enterprises	22,646	Accommodation and Food Services	21,614	Accommodation and Food Services	22,385

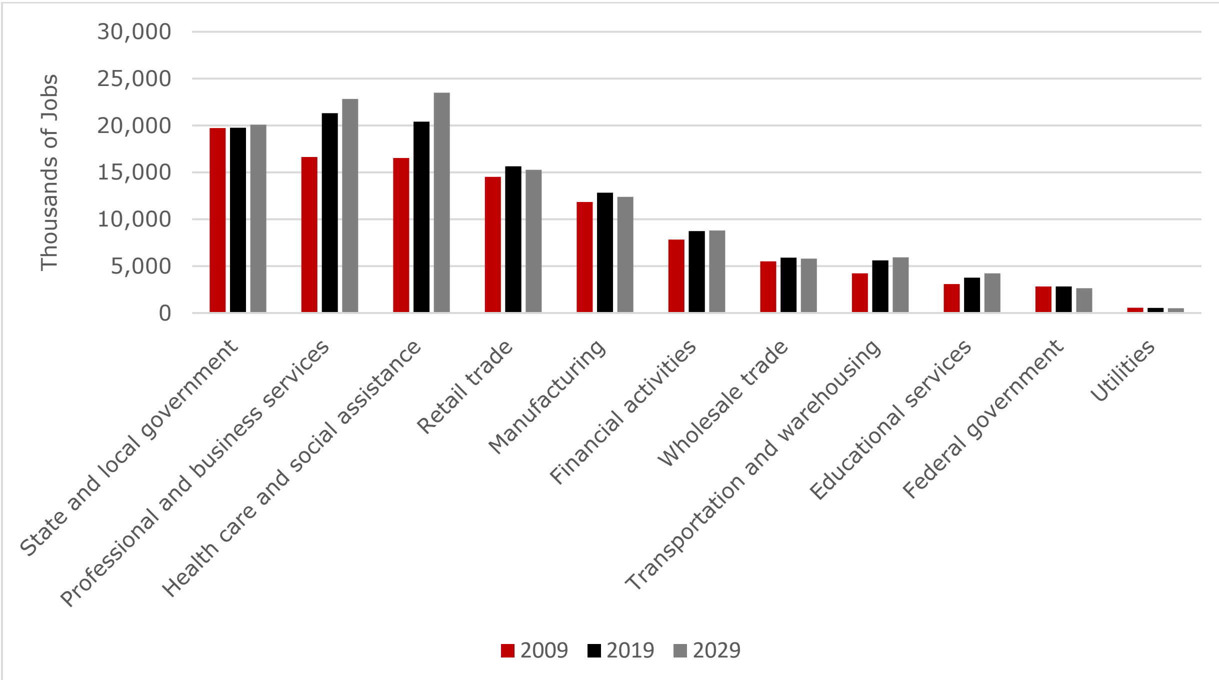
Source: EMSI Data for Cincinnati, Ohio

National and Regional Economic Outlook

National economic dynamics influence the performance of the local economy. National projections for the key sectors previously discussed anticipate continued slowed growth in Manufacturing and accelerated growth in Education and Health Services. Growth in Education and Health Services real GDP nationally is anticipated to be strong through 2026, followed by Professional and Business Services. As illustrated in Figures 5 and 6, two of the highest value producing industries nationally are associated with the largest, projected employment growth.

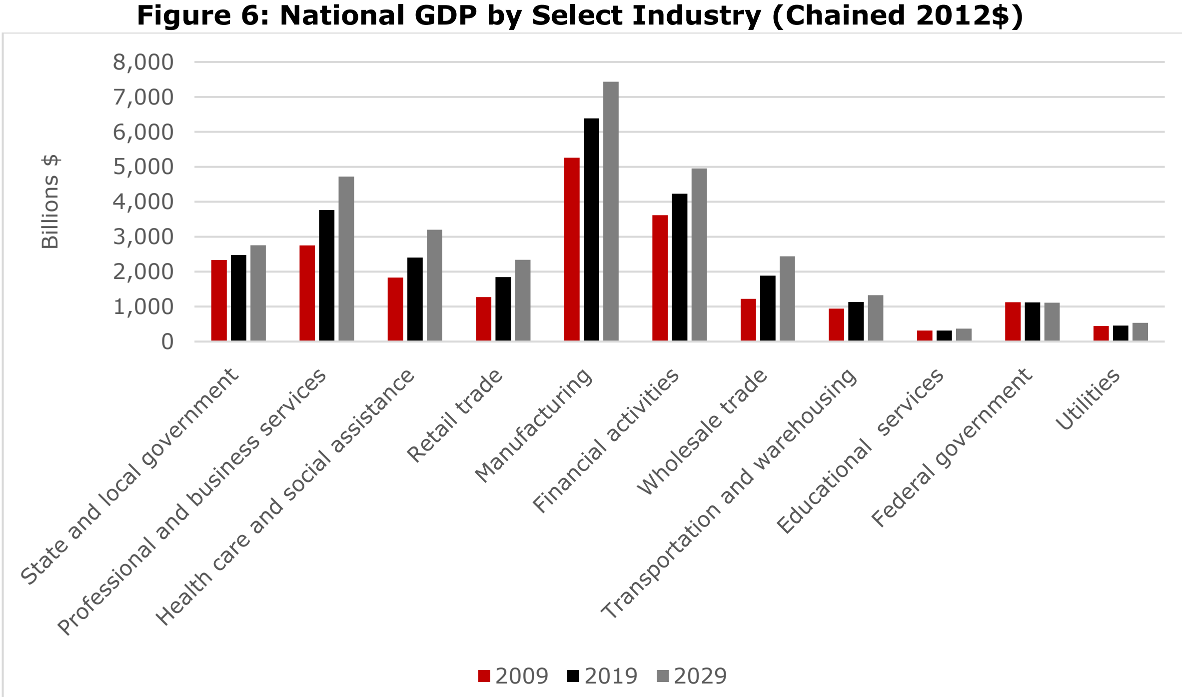
The groupings most significant to the local economy in terms of total employment and wages – Health Care and Social Assistance and Professional and Business Services – are expected to see greater growth in employment nationally, and also account for significant economic output as measured by real GDP. Assuming the City economy follows national trends, gains in Health Care and Social Assistance and Financial Activities sectors, along with gains to their respective output, may offset any losses from declining Manufacturing employment.

Figure 5: National Employment by Select Industry



Source: Bureau of Labor Statistics, Table 2.1 - Employment by Major Industry Sector, 2009, 2019, and Projected 2029

Figure 6: National GDP by Select Industry (Chained 2012$)



Source: Bureau of Labor Statistics, Table 2.2-Output by Major Industry Sector, 2009, 2019, and Projected 2026

In January of 2021, the Ohio Chamber of Commerce released its Economic Outlook, which is optimistic given the economic shock the Coronavirus Pandemic had on many industries and households. The Ohio Chamber cited significant losses in employment, production, and profits due to the pandemic as major contributing factors to the State of Ohio's worst quarter in its economic history. However, the Ohio Chamber is optimistic regarding the State's ability to rebound post-pandemic given the booming housing industry and Ohio consumers have more than $1 trillion dollars in savings and revolving debt. Further, the 2021 Outlook noted that retail spending has rebounded and exceeded pre-pandemic spending levels. The Ohio Chamber of Commerce is expecting continued, albeit slowing economic growth.

The Cleveland Federal Reserve Bank, in its most recent Beige Book entry,[7] notes improved customer demand in the Fourth District, due, in part, to declining rates of coronavirus infections, increased availability of vaccine, and fiscal relief. Labor demand remains varied across industry sectors. In particular, the Freight Sector reported strong demand for labor and many firms have claimed they would like to hire additional employees. Labor demand was the weakest for the Financial Services Sector. Companies in several sectors including Construction, Manufacturing, and Retail have a need to increase employment but have had trouble finding candidates for open positions. Further, it is important to note that more employers reported increasing wages that at any other time during the Coronavirus Pandemic. Raises were between 2.0 percent to 3.0 percent.

JP Morgan's 2021 Economic Outlook is considerably optimistic and concludes that 2021 will experience strong economic growth and expects Real GDP to exceed pre-pandemic levels by September 2021.[8] Employment is likely to make small job gains during the first two quarters of 2021 and then accelerate as a result of vaccination which is likely to drive demand for social activities including vacation travel, family gatherings, and live sporting events. Further, JP Morgan expects employment to fully recover in the third quarter of 2022.

[7] Fourth District Beige Book (clevelandfed.org)

[8] The pandemic and the recovery | J.P. Morgan Asset Management

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