Income Tax Forecast

FY2018-2023

city of CINCINNATI

UC ECONOMICS CENTER
RESEARCH AND CONSULTING

TABLE OF CONTENTS

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 for the six-year period of FY 2018- FY 2023 appear in Table ES-1.

Aggregate net income tax revenues are projected to grow at 2.5 percent annually on average from FY 2018 through FY 2023, lower than the average annual rate from 2004 to 2017. 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.

Table ES-1: Net Income Tax Revenue Forecast

Fiscal Year	Income Tax Net Revenues ($M)	Growth Rate	Real Growth rate	Net Operating Revenues ($M)	US Inflation Forecast
2018	$371.7	1.2%	-0.5%	$274.4	1.7%
2019	$382.0	2.8%	0.8%	$281.9	1.9%
2020	$391.6	2.6%	0.7%	$289.1	1.8%
2021	$400.4	2.3%	-0.2%	$295.5	2.4%
2022	$409.7	2.3%	-0.4%	$302.4	2.7%
2023	$419.6	2.4%	-0.1%	$309.7	2.5%
Average		*2.5%**	*0.2%**		*2.2%**

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

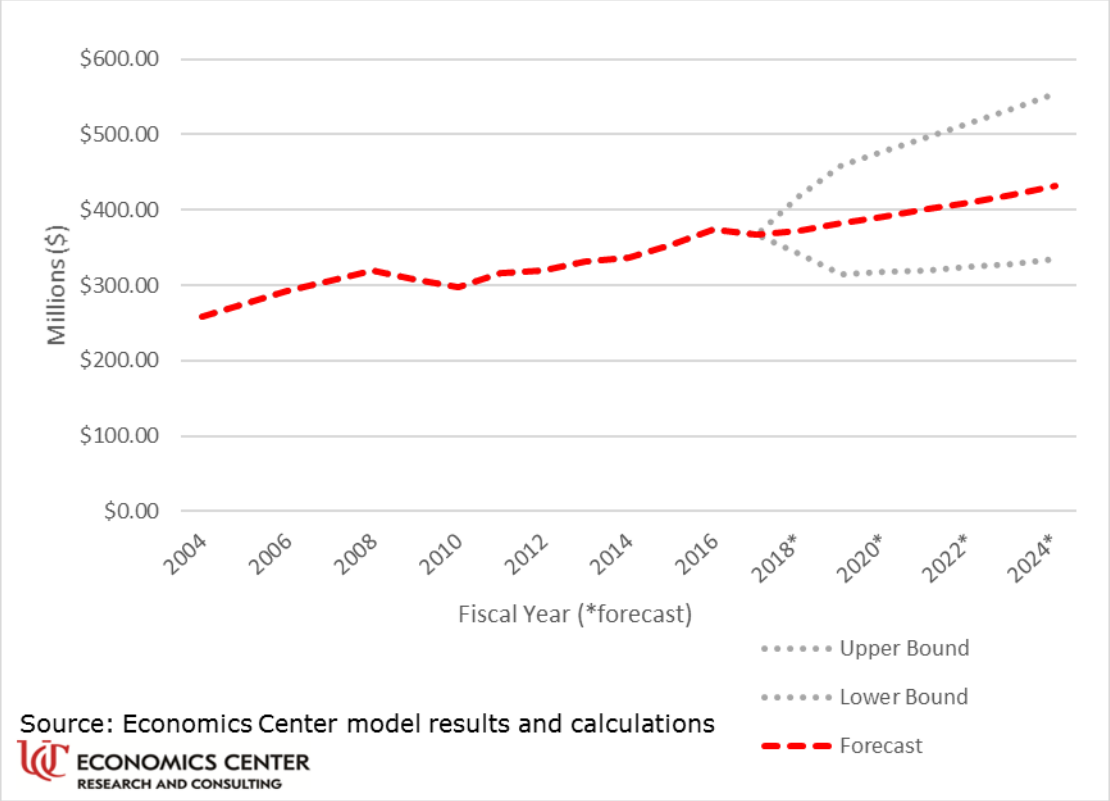
Baseline forecast estimates are an average constructed from two statistical models used to produce the forecast, and are shown in Table ES-2. The 95-percent confidence intervals estimated for the baseline forecast produce upper and lower bound net revenue amounts. The bounds provide the range within which baseline revenues are estimated to fall with 95-percent probability. The range increases in later years, indicative of the additional uncertainty in the forecast for longer time horizons. These forecasts are shown graphically in Figure ES-1.

Table ES-2: Forecast Upper and Lower Bounds, FY 2018-FY 2023

Fiscal Year	Total ($M)		
	Lower Bound	Income Tax Net Revenues	Upper Bound
2018	$341.7	$371.7	$417.6
2019	$313.9	$382.0	$458.3
2020	$317.0	$391.6	$477.8
2021	$319.9	$400.4	$495.8
2022	$323.8	$409.7	$514.4
2023	$328.3	$419.6	$533.6

Source: Economics Center model results and calculations.

Figure ES-1: Baseline and Adjusted (Final) Net Tax Revenue Forecasts



Business income tax revenues exhibit the greatest volatility among the sources of income tax revenues. Business Income tax revenues are anticipated to increase by 1.3 percent annually on average during the forecast period.

Individual non-withholding revenues exhibit considerable seasonal patterns, with April manifesting as the predominant month when these revenues are received. These revenues are anticipated to decrease by 0.8 percent, annually on average during the forecast period.

An internal policy change, converting Property Investment Reimbursement Agreements (PIRAs) to Job Creation Tax Credits (JCTC) lowers future forecasted net revenue values by shifting the funding of these incentives from an appropriated departmental expenditure to a tax expenditure deducted directly from income tax payroll withholding.

- These economic incentives add to the employment tax base through the portion of payroll taxes for retained and new jobs that accrue to the City. Net income tax revenues have displayed historical growth in the presence of these credits and incentives, about 3 percent on average annually.
- As a tax expenditure, the incentive payments reduce net income tax revenues compared to the baseline total estimated. Although the overall City budget is unaffected as departmental expenditures experience a commensurate reduction.
- Baseline forecast estimates for FY 2018 – FY 2023 were adjusted to reflect these refundable JCTC credits.

- Growth in anticipated payments refunded out of net tax revenues yields lower growth in net revenues, and a slower growth rate than in the absence of refunding these payments directly out of income tax revenues.

All revenue forecasts between fiscal years 2018 and 2023 have been adjusted to reflect values without revenues that are now allocated to JCTCs.

Increased use of economic development incentives introduces greater volatility into future net tax revenues, for several reasons such as:

- contracts are negotiated on an individual basis and as such do not exhibit a consistent or predictable pattern;

- refunds occur with approximately a two-year lag following job creation, thus payroll withholdings will increase in the first year but a refund must be anticipated in a future fiscal year;

- employers do not always request the negotiated refund as actual job creation may differ from anticipated at the time of the agreement.

Consistent with existing national and regional forecasts,[1] the current revenue forecast projects growth but lower than the previous forecast. There are a number of factors that may be contributing to this. For example, national and regional unemployment numbers are at a nearly two decade low. However, labor force participation is also depressed to mid-1970s levels and seems to be flattening out at this level. Peak labor force participation nationally was just over 67 percent and now we are less than 63 percent.

Analysis of employment and industry data illustrate the diverse commercial base of the local economy. Education and Health Services, Professional and Business Services, Trade, Transportation and Utilities, Financial Activities and Manufacturing are industry sectors of note.

Consistent with national projections, local Manufacturing employment is expected to decline. Education and Health Services and Financial Activities employment are both expected to grow nationally and locally. Data on local employment projects declines in Trade, Transportation, and Utilities employment as well as Business and Professional Services in contrast with national projections.

[1] National Economic Estimating Conference. (2018). *Long-Run Tables.*

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) 2018 to FY 2023. 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. 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

For FY 2017, the City of Cincinnati received approximately $367.5 million in net income tax revenues from all sources. Fiscal Year 2017 exhibited a 0.4 percent nominal increase in revenues over the prior year, a real decrease of 1.8 percent after adjusting for inflation. The pattern of net income tax revenues exhibits varying growth rates, with years of high growth clustered together generally followed by a few years of slower growth. The real growth rate also illustrates volatility in net income tax revenues overtime. Historical revenue trends are displayed in Table 1.

Table 1: Net income Tax Revenues, FY 2004-FY 2017*

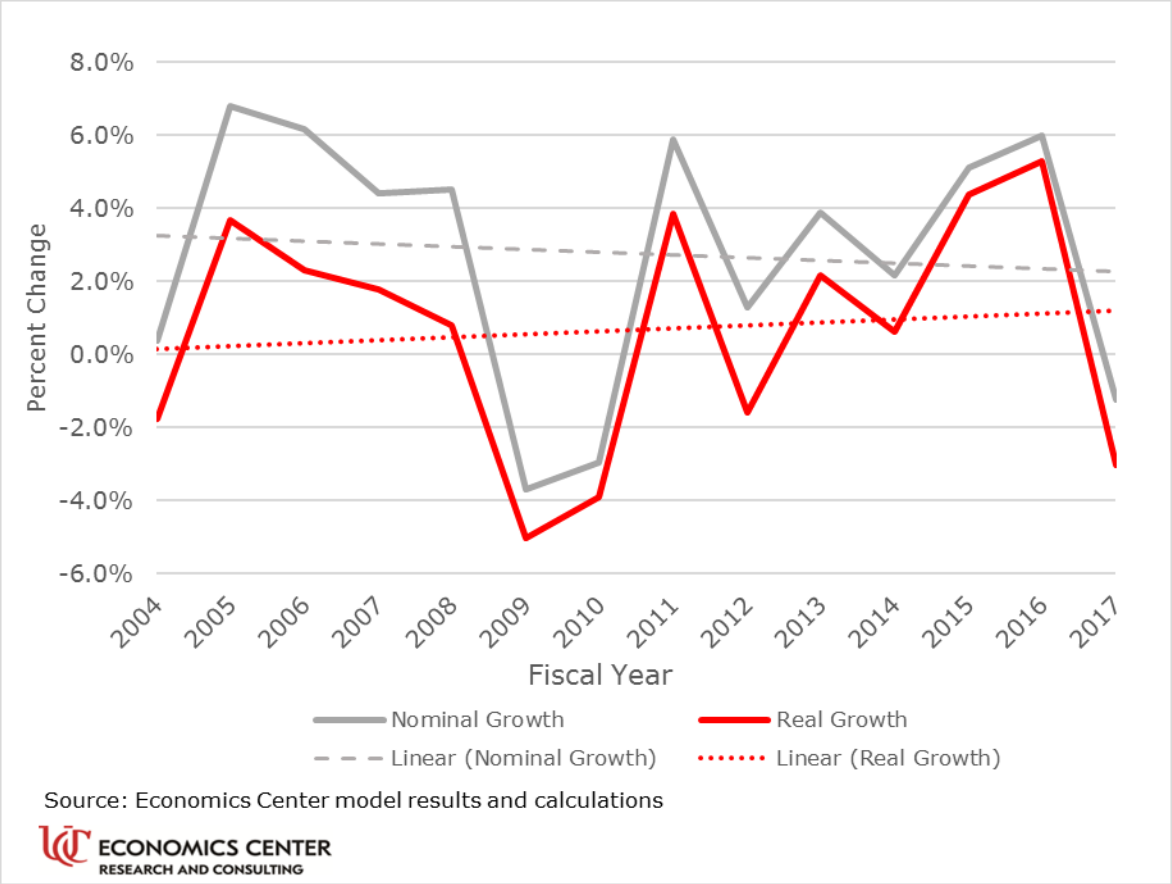
Fiscal Year	Total Net Revenues ($M)	Growth Rate	Real Growth Rate
2004	$257.7	0.4%	-1.8%
2005	$275.2	6.8%	3.7%
2006	$292.2	6.2%	2.3%
2007	$305.1	4.4%	1.8%
2008	$318.9	4.5%	0.8%
2009	$307.1	-3.7%	-5.0%
2010	$298.0	-3.0%	-3.9%
2011	$315.6	5.9%	3.8%
2012	$319.6	1.3%	-1.6%
2013	$332.0	3.9%	2.2%
2014	$335.9	1.2%	-0.4%
2015	$353.1	5.1%	4.4%
2016	$373.4	5.7%	5.0%
2017	$367.5	-1.6%	-3.4%

Source: Economics Center calculations

*In the second half of FY2016 a change in the collections process accelerated the receipt of $7.2 million in withholding revenues. To better reflect actual annual dynamics and account for this idiosyncratic process change, these collections have been omitted from the analysis.

The long run average growth rate of real net revenues is approximately 0.6 percent and has displayed little change since 2004. 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 indicate 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. Figure 1 displays the nominal and real growth rates of net income tax revenues.

Figure 1: Nominal and Real Growth Rates of Net Income Tax Revenues, FY 2004-FY 2017



Historically, payroll withholding is the largest component of income tax collections, generating slightly more than 80 percent of net revenues. Individual non-withholding revenues have consistently accounted for approximately 5 percent of total net income tax revenues. Business income tax revenues have displayed the greatest volatility since FY 2004, accounting for as little as 8 percent of total net revenues to nearly 16 percent. Generally, increases in the business earnings tax revenues coincide with declines in payroll withholdings. Shares of the components of income tax revenues are displayed in Table 2.

Table 2: Components of Net Income Tax Revenues, FY 2004-FY 2017*,**

Fiscal Year	Individual Non-Withholding	Business	Payroll Withholding
2004	5.0%	9.1%	85.9%
2005	4.9%	8.3%	86.8%
2006	5.6%	11.3%	83.0%
2007	5.2%	12.4%	82.4%
2008	5.7%	14.2%	80.1%
2009	4.9%	15.7%	79.4%
2010	5.0%	13.1%	81.9%
2011	5.1%	11.3%	83.6%
2012	5.4%	13.2%	81.4%
2013	5.2%	11.9%	82.9%
2014	5.2%	12.2%	82.6%
2015	5.3%	13.6%	81.1%
2016	5.2%	15.0%	79.8%
2017	5.6%	13.2%	81.2%

Source: Economics Center calculations
*Individual non-withholding and Payroll Withholding net revenues are adjusted for employee refunds. Prior series deducted these refunds from the Individual component; however, these refunds are made from Payroll Withholding.
** Components may not sum to 100% due to rounding.

AGGREGATE FORECAST

To forecast net income tax revenues for the six-year horizon, FY 2018 through FY 2023, the Economics Center analyzed historical patterns for total net revenues and its components. Consistent with the prior forecast, two estimation methodologies were used – an autoregressive integrated moving average (ARIMA) model and a vector error correction model (VECM). While the ARIMA model utilizes only the historical data on revenues, the VECM model also incorporates information regarding dynamics of the national economy. Also consistent with the prior forecast, the initial estimate which forecasts the second half of FY 2018 is from the ARIMA model. The remaining forecast years are a consensus estimate of both the VECM and the ARIMA models.[2] The ARIMA and VECM estimates form the baseline net tax revenue forecast. The Economics Center then accounted for potential refunds out of payroll withholdings due to the conversion of the Property Investment Reimbursement Agreements (PIRAs) to a Job Creation Tax Credit (JCTC) for the years FY 2018- FY 2023.[3] The PIRA-conversion adjusted estimates constitute the final forecast.

Total net revenue estimates, along with upper and lower bounds constructed for 95-percent confidence intervals, and the forecast growth rates are presented in Table 3. Forecasted net revenues for the current fiscal year are estimated at $371.7 million, an increase of 1 percent from fiscal year 2017. While the actual growth rate varies year to year, the compound annual expected nominal growth rate is 2.5 percent.

[2] Two refinements from the prior forecast to improve the estimates include accounting for seasonal fluctuations within the VECM model and an average estimate for all years after the initial fiscal year. See the appendix for more detail.
[3] PIRA conversion is discussed in greater detail in a subsequent section.

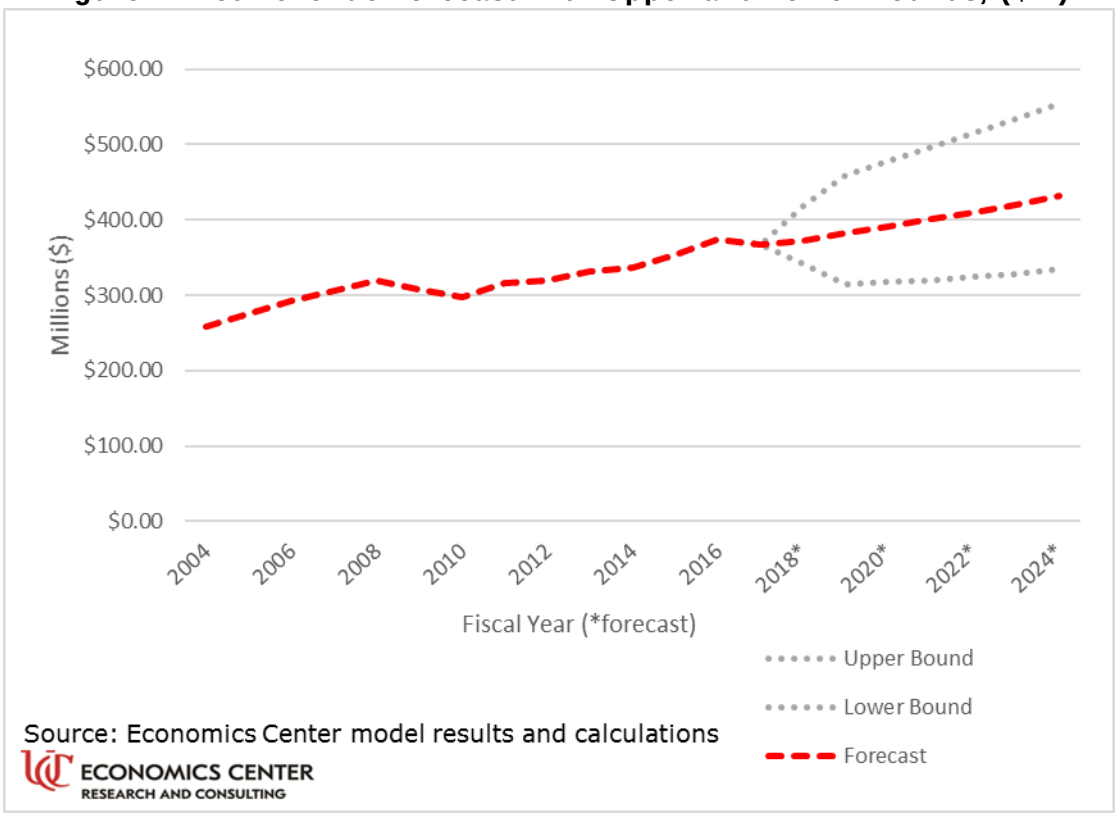
Table 3: Forecasted Net Income Tax Revenue and Growth Rates, FY 2018-FY 2023

Fiscal Year	Forecast ($M)	Lower Bound ($M)	Upper Bound ($M)	Growth Rate	Real Growth Rate	US Inflation
2018	$371.7	$341.7	$417.6	1.2%	-0.5%	1.7%
2019	$382.0	$313.9	$458.3	2.8%	0.8%	1.9%
2020	$391.6	$317.0	$477.8	2.5%	0.7%	1.8%
2021	$400.4	$319.9	$495.8	2.2%	-0.2%	2.4%
2022	$409.7	$323.8	$514.4	2.3%	-0.4%	2.7%
2023	$419.6	$328.3	$533.6	2.4%	-0.1%	2.5%
Average				*2.5%**	*0.2%**	*2.2%*

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

Figure 2 displays the forecast value along with the upper and lower bounds. Net income tax revenues are forecasted to increase at a slightly lower rate than historically observed. The range for the forecast values (upper and lower bounds) are $342 to $418 million in FY 2018 and $328 to 534 million in FY 2023. The upper and lower bounds are formed from the 95-percent confidence intervals, calculated from the baseline forecast.

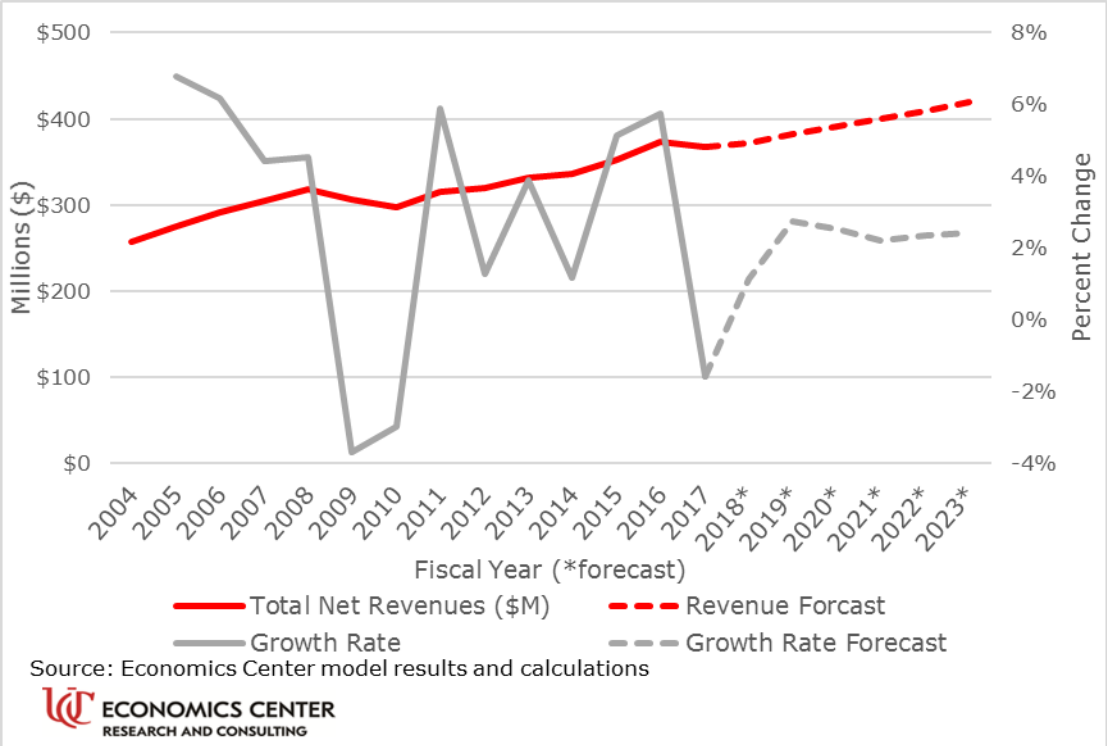
Figure 2: Net Revenue Forecast with Upper and Lower Bounds, ($M)



Nominal average annual growth over the forecast period is 2.5 percent, slower than the historical rate of change of 2.9 percent due in part to the anticipated PIRA-converted JCTC

refunds. As shown in Figure 3, the anticipated future nominal growth is experience steady and consistent growth throughout 2023.

Figure 3: Net Revenue Forecast, Total ($M) and Growth Rate



Approximately 74 percent of net income tax revenues accrue to the City's Operating Fund (1.55 percentage points), with the remainder of revenues distributed among Infrastructure (0.10 percentage points), Public Transit (0.3 percentage points), and Permanent Improvements (0.15 percentage points) funds. The forecasted estimates for net income tax revenues result in approximately $274.4 million for the operating fund in FY 2018, with a lower and upper bound of $252 to $308 million respectively. These values are shown in Table 4.

Table 4: Forecasted Net Operating Revenues ($M), FY 2018-FY 2023

Fiscal Year	Forecast	Lower Bound	Upper Bound
2018	$274.4	$252.2	$308.2
2019	$281.9	$231.7	$338.3
2020	$289.1	$234.0	$352.6
2021	$295.5	$236.1	$366.0
2022	$302.4	$239.0	$379.7
2023	$309.7	$242.3	$393.9

Source: Economics Center model results and calculations

COMPONENTS OF INCOME TAX COLLECTIONS

Income tax for the City consists of an equal 2.1 percent of income generated from three sources – payroll withholding, business profit or income, and individual non-withholding. Each of these series displays slightly different dynamics. As payroll withholding is the largest component of income tax revenues its patterns tend to dominate the patterns of the total; however, the dynamics of all components influence total revenues. As noted previously, payroll withholdings tend to move inversely with business income. Analysis of each income tax revenue source illustrates that Payroll and Individual Non-Withholdings have the strongest seasonal components. These sources of income tax revenue are more sensitive to changes in national employment, while business income tends to be more sensitive to national gross domestic product (GDP).

To produce the forecast, net payroll withholdings and total revenues were jointly forecasted in a VECM and ARIMA model, and the payroll withholdings component was analyzed using the VECM model. Both series were seasonally adjusted. A residual (the sum of net business income and individual non-withholding revenues) was calculated from the forecasts for payroll withholdings and total revenues. Historical shares of these components were then analyzed to estimate future business income and individual non-withholding net revenues. To account for the conversion of Property Investment Reimbursement Agreements (PIRAs) to Job Creation Tax Credits (JCTC), an estimate of future JCTC refunds has been deducted from forecasted payroll withholding net revenues. Discussed in greater detail in a subsequent section, the internal policy change results in refunds being issued from payroll withholdings whereas formerly these incentives were paid as an expenditure out of a departmental budget for the City.

Payroll Withholding

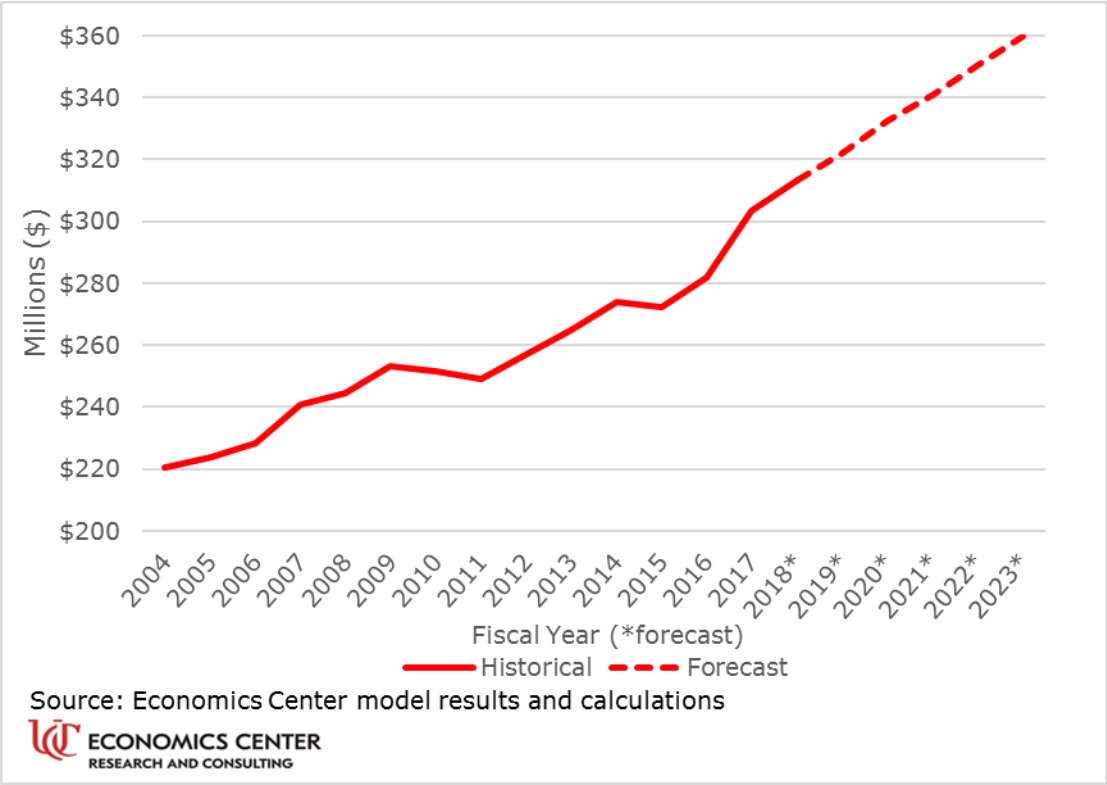
Forecast estimates for payroll withholdings exhibit moderate growth through most of the forecast period, as shown in Table 5 and graphically in Figure 4. Payroll withholdings in the City grew at an average annual rate of 2.5 percent between fiscal years 2004 and 2017. Future revenues are forecast to grow at a rate of 2.8 percent annually from FY 2018 to FY 2023.

Table 5: Payroll Withholding Net Revenues, FY 2018 - 2023

Fiscal Year	Net Revenues ($M)	Share of Total	Growth Rate
2018	$313.5	84.3%	3.3%
2019	$322.2	86.7%	2.8%
2020	$332.2	87.0%	3.1%
2021	$340.9	87.0%	2.6%
2022	$350.1	87.4%	2.7%
2023	$359.6	87.8%	2.7%
Average			*2.8%**

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

Figure 4: Payroll Withholding Net Revenues



Business Income

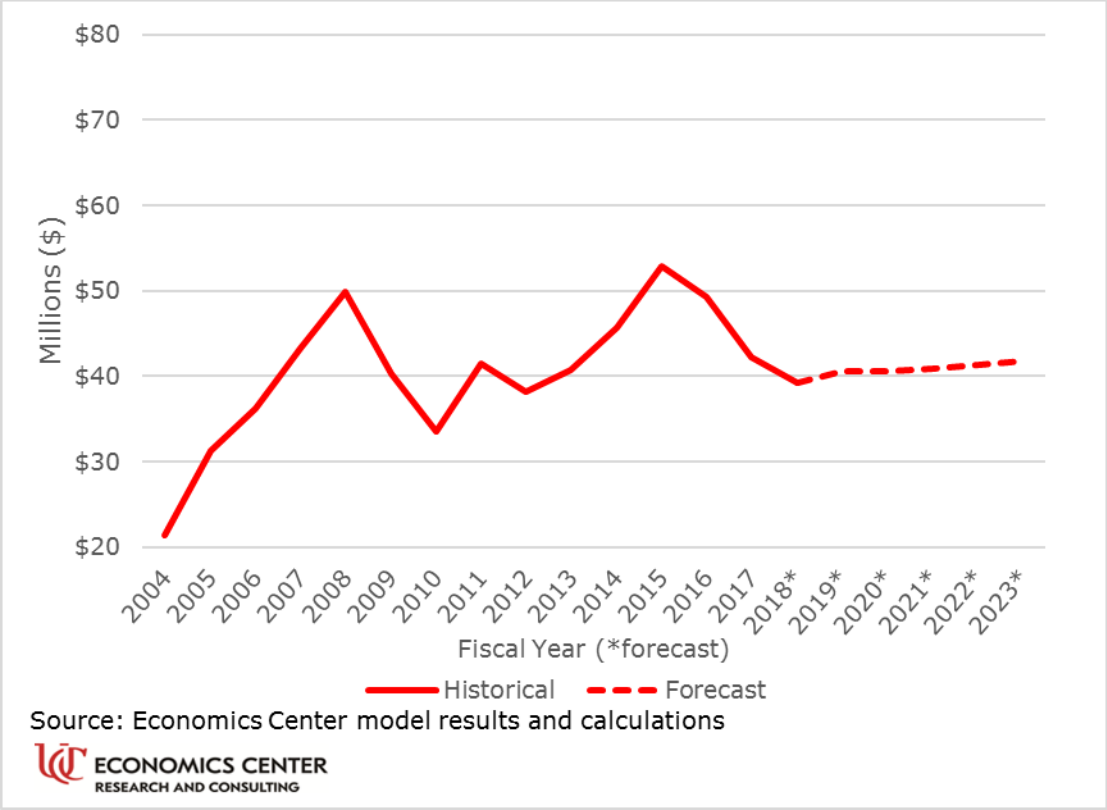
Business income tax revenues exhibit less consistency annually than payroll withholding revenues. These revenues have grown at an average annual rate of approximately 6.5 percent between fiscal years 2004 and 2017, although with considerable variability. Table 6 shows the forecasted values of business income tax revenues while Figure 5 shows historical and forecasted revenues. An average annual increase of 1.3 percent is projected for the period FY 2018 through FY 2023.

Table 6: Business Income Net Revenues, FY 2018 - 2023

Fiscal Year	Net Revenues ($M)	Share of Total	Growth Rate
2018	$39.3	10.6%	-7.0%
2019	$40.6	10.6%	3.4%
2020	$40.6	10.4%	0.0%
2021	$40.9	10.2%	0.8%
2022	$41.3	10.1%	0.8%
2023	$41.8	10.0%	1.4%
Average			*1.3%**

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

Figure 5: Business Income Net Revenues, FY 2004 – 2023



Source: Economics Center model results and calculations

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Individual Non-Withholding

Similar to business income, net revenues from individual non-withholding exhibit considerable variability annually. The post-recession period has seen slower growth than prior to the recession. From fiscal years 2003 to 2007, individual non-withholding revenues grew at an average annual rate of 8.4 percent. In the recovery period from 2011 to 2016, the average annual growth rate was 4.6 percent.

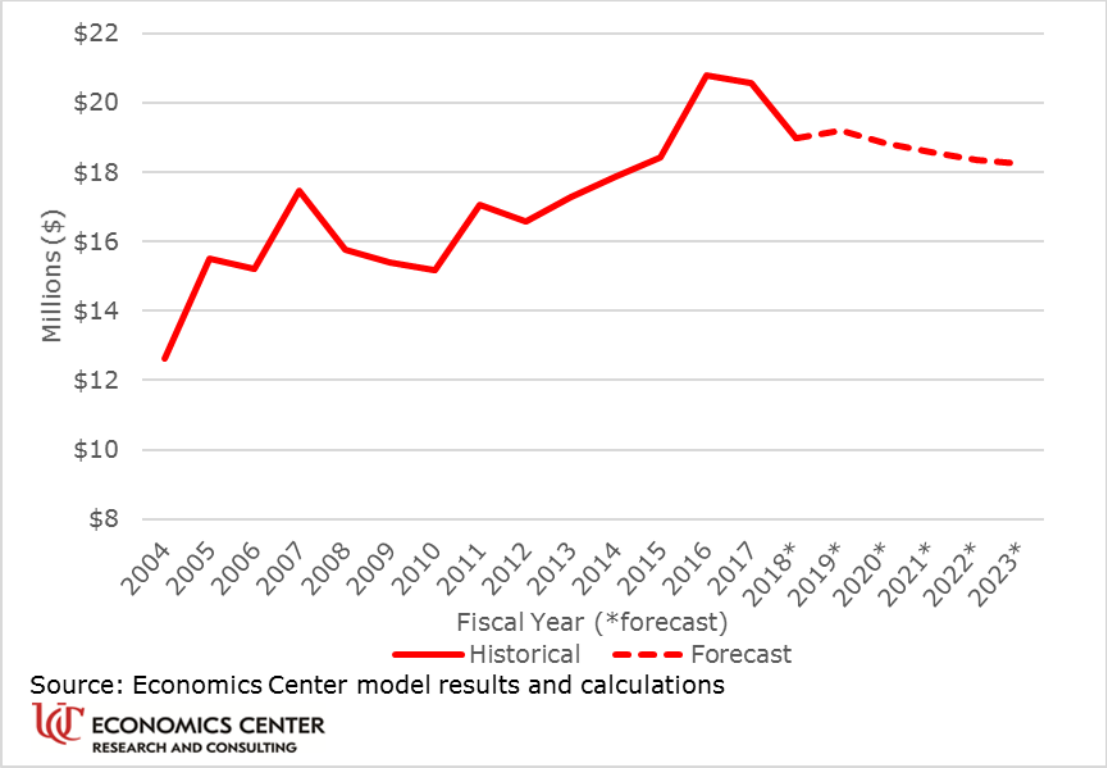
The projected average annual change for this component is a decrease of 0.8 percent per year for the forecast period, as shown in Table 7. In other words, the long-run trajectory of individual non-withholding revenues is expected to be relatively flat; however, the actual growth rate may be higher or lower in any given year. Figure 6 shows the historical and forecasted individual non-withholding net revenues.

Table 7: Individual Non-Withholding Net Revenues, FY 2018 - 2023

Fiscal Year	Net Revenues ($M)	Share of Total	Growth Rate
2018	$19.0	5.1%	-7.8%
2019	$19.2	5.0%	3.4%
2020	$18.8	4.8%	0.0%
2021	$18.6	4.6%	0.8%
2022	$18.4	4.5%	0.8%
2023	$18.2	4.3%	1.4%
Average			*-0.8% **

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

Figure 6: Individual Non-Withholding Net Revenues, FY 2004 - 2023



POLICY CONSIDERATIONS

Policy and Process Change

Recently the Property Investment Reimbursement Agreements (PIRA) have been converted to Job Creation Tax (JCTC). As a result of this change, refunds associated with the JCTC are drawn from payroll withholding whereas PIRAs previously were issued as an expenditure in a departmental budget. The City may offer a JCTC to a company as an incentive to expand in or move to Cincinnati, based on certain eligibility criteria. The company then commits to maintain a level of retained and new employment for an agreed upon term.

The length of the JCTC and value are negotiated on a per case basis. The value of the JCTC is based on a percentage of payroll withholding taxes from the new employment created. This value is then credited back to the company. In practice the JCTC is refunded out of the City's payroll withholding revenues but in principle functions as a reduction in a business's earnings tax obligation.[4, 5]

The forecast takes into account estimated PIRA and JCTC-R expenditures for years 2018-2023.

[4] http://choosecincy.com/Economic-Development/Programs-Services/Incentives-Financing/Job-Creation-Tax-Credit.aspx
[5] http://choosecinci.com/services/business-development-resources/property_investment_reimbursement

Ohio House Bill 5

Effective January 1, 2016 House Bill 5 (HB 5) modified certain aspects on all components of income tax revenues. In particular, HB 5:

- impacts individual non-withholding revenues through limiting deductions of employee business expenses and extending tax exemption for non-resident income earned;
- changes how business calculate net operating losses (NOL) for deductions, as well as provides more flexibility in allocation methods and filing;
- requires businesses remitting employee withholdings to do so twice a year if withholdings exceed $12,000 annually.

Interest and penalties have also changed, and penalties are capped for late filings.

Calculations of deductions and exemptions and changes to allocation methods may impact the amount refunds and net revenues received by the City. Changes to required timing of filings may impact the timing of revenue receipt. With greater flexibility and options available to income tax filers, more volatility may be introduced into net revenues complicating future forecasts.

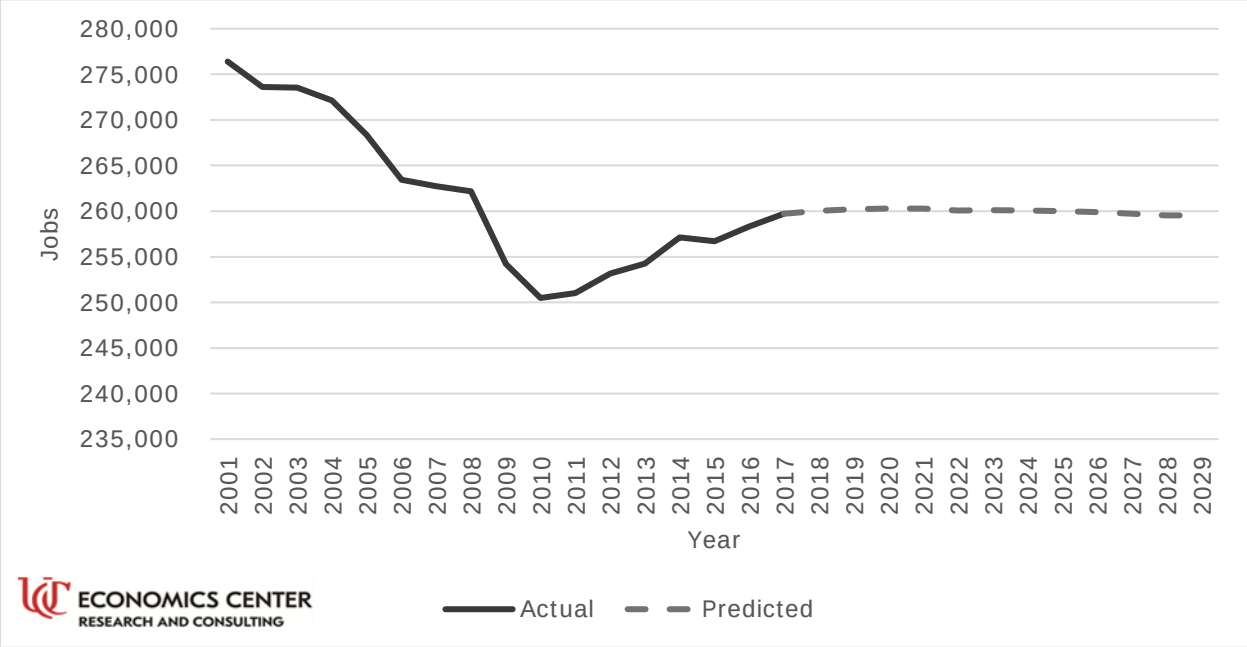
ECONOMIC CONDITIONS

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 7 shows the number of jobs in Cincinnati from 2001-2017 and estimates moving forward to 2028. While the Great Recession increased the rate at which jobs were leaving the City, Cincinnati saw steady job decline from 2001 to 2010. Since 2010, there has been moderate recovery. Based on the EMSI estimates, Cincinnati's total job count is expected to stagnate through 2028.

Figure 7: Jobs in Cincinnati 2001 – 2017 and Projected 2018 - 2028



Source: EMSI Data for Cincinnati, Ohio

The types of jobs within Cincinnati's economy have also changed since 2001. Table 8 shows the top five industries in 2001 and 2017 as well as projected in 2028. Health Care and Social Assistance is consistently the job 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 54 percent of all jobs in all industries in 2001, 2017, and 2028 respectively.

While manufacturing was the second largest employer in 2001, it dropped off of the top-5 list to seventh in 2017. In 2017, the second through fourth rank includes: Government; Accommodation and Food Services; Management of Companies and Enterprises; and Professional, Scientific, and Technical Services. Estimated 2028 industry composition for the top-5 matches the 2017 ranking.

While manufacturing is expected to lose approximately 12,000 jobs, we see Accommodation and Food Services having the largest gain in terms of rank. This is also notable because the average wages associated with Accommodation and Food Services being less than manufacturing.

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 8: Top Five Industries, 2001, 2017, and 2028 Projected

2001		2017		2028	
Industry	**Jobs**	**Industry**	**Jobs**	**Industry**	**Jobs**
Health Care and Social Assistance	41,329	Health Care and Social Assistance	50,425	Health Care and Social Assistance	54,867
Manufacturing	29,799	Government	24,704	Government	23,679
Government	28,663	Accommodation and Food Services	22,517	Accommodation and Food Services	23,849
Management of Companies and Enterprises	20,659	Management of Companies and Enterprises	20,640	Management of Companies and Enterprises	17,537
Accommodation and Food Services	20,524	Professional, Scientific, and Technical Services	20,121	Professional, Scientific, and Technical Services	19,756

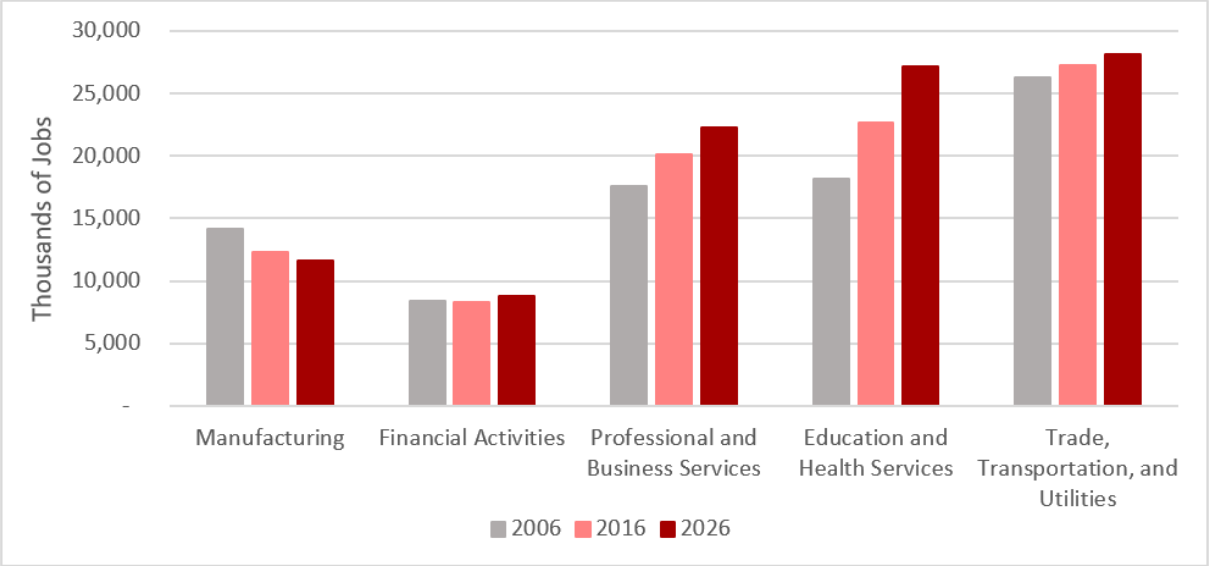
Source: EMSI Data for Cincinnati, Ohio

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 8 and 9, two of the highest value producing industries nationally are associated with the largest, projected employment growth.

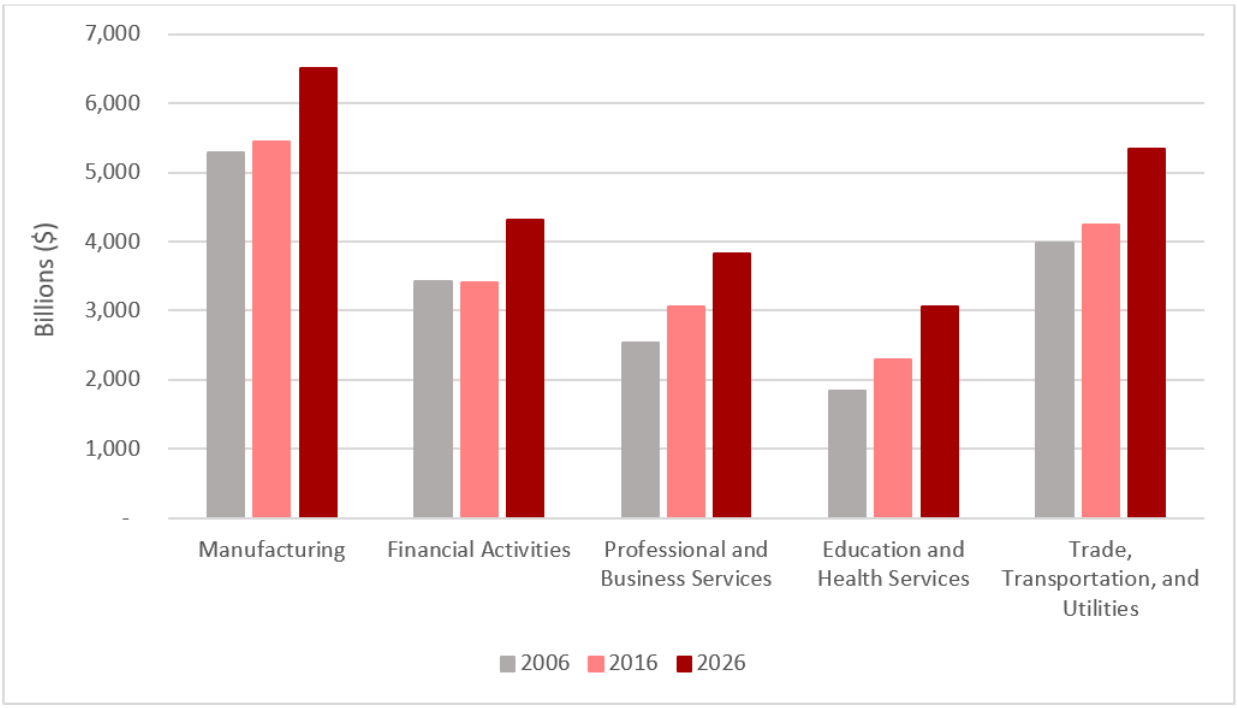
The groupings most significant to the local economy in terms of total employment and wages – Educational and Health Services and Professional and Business Services – are expected to see greater growth in employment nationally, and also account for significant economic output as measured by real GDP. Assuming the City economy follows national trends, gains in Education and Health Services and Financial Activities sectors, along with gains to their respective output, may offset any losses from Manufacturing employment. Employment in the Financial Activities is also anticipated to experience much stronger growth locally in comparison to national employment data.

Figure 8: National Employment by Industry Grouping



Source: Bureau of Labor Statistics, Table 2.1 - Employment by Major Industry Sector, 2006, 2016, and Projected 2026

Figure 9: National GDP by Industry Grouping (Chained 2009$)

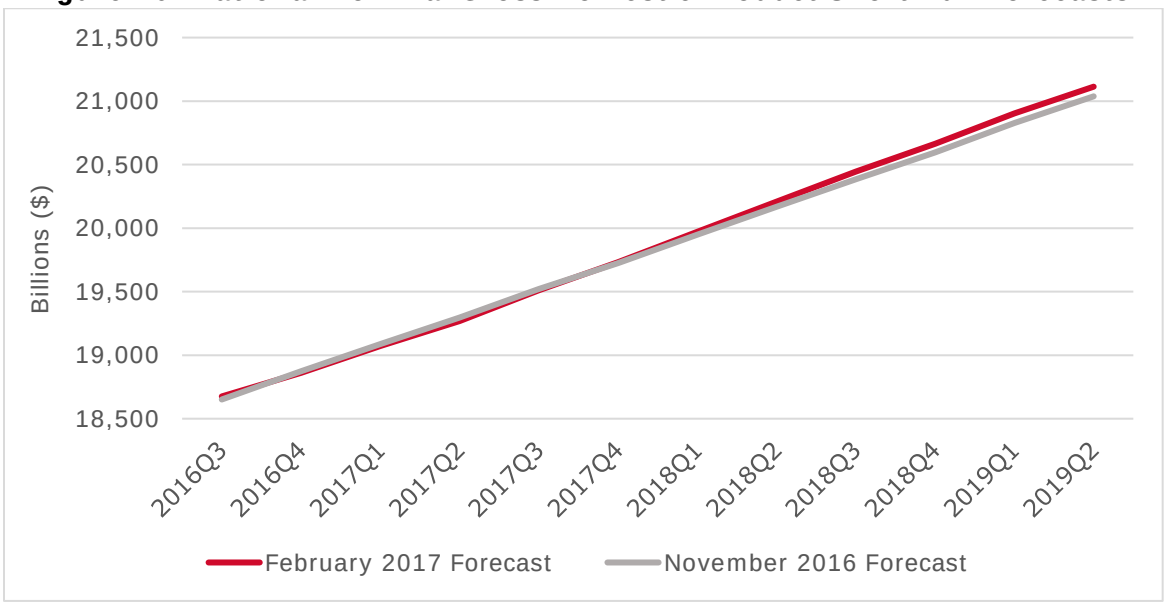


Source: Bureau of Labor Statistics, Table 2.2 - Output by Major Industry Sector, 2006, 2016, and Projected 2026

Two key components explicit for the local forecast include national nominal gross domestic product (GDP) and national nonfarm employment. As noted in the most recent release from the National Economic Estimating Conference (NECC), national indicators are still projecting growth in coming quarters at a slightly more accelerated pace than originally forecasted in

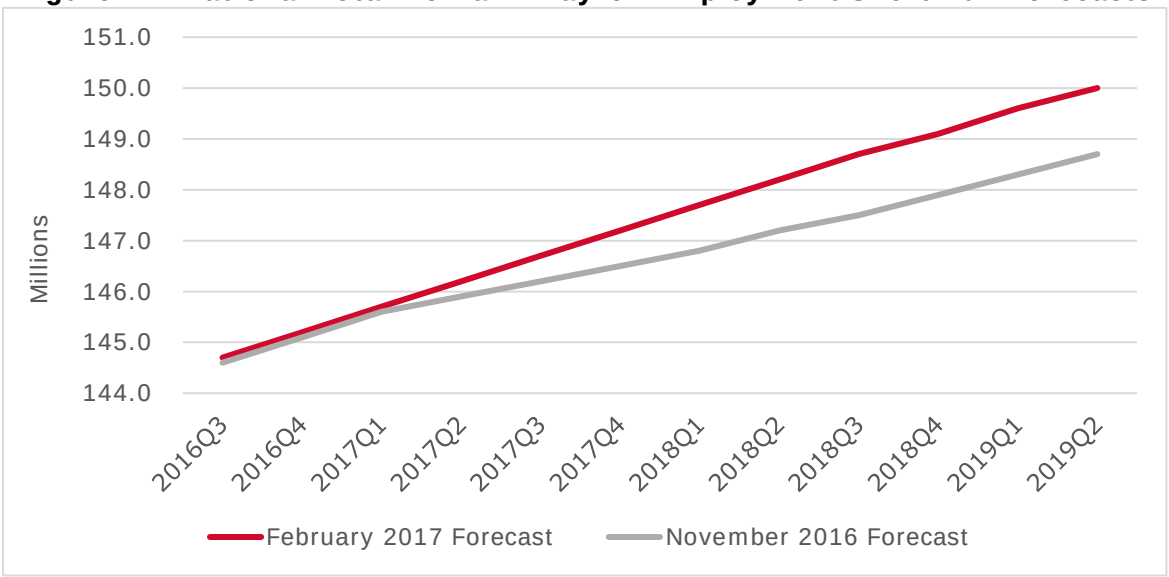
November of 2016.[6] Figures 10 and 11 illustrate changes in short run national economy projections between forecasts developed in November 2016 and February 2017.

Figure 10: National Nominal Gross Domestic Product Short Run Forecasts



Source: National Economic Estimating Conference Short-Run Tables – Held February 10, 2017 and July 12, 2017

Figure 11: National Total Nonfarm Payroll Employment Short Run Forecasts



Source: National Economic Estimating Conference Short-Run Tables – Held February 10, 2017 and July 12, 2017

In January of 2018, the Ohio Chamber of Commerce released its Economic Outlook, citing momentum and improvements regarding GDP, along with statewide and corporate tax cuts that have been found to accelerate the State's economy. The outlook cited concerns regarding the regulatory environment to business. However, the current federal

[6]National Economic Estimating Conference.
http://edr.state.fl.us/Content/conferences/useconomic/index.cfm

administration has already significantly reduced a number of regulations by signing an executive order to cut two regulations for every new one imposed. For the State of Ohio overall, positive growth is anticipated for the current year in comparison to that of 2017.[7]

The Cleveland Federal Reserve Bank, in its most recent Beige Book entry,[8] notes that hiring was strongest in Manufacturing and Construction. However, there are also challenging conditions regarding the attraction of talent to the Fourth District. This tough competition for workers has led employers to increase wages, primarily for that of the lower-wage positions. These dynamics may affect the outlook and future performance for Manufacturing and Trade, Transportation, and Utilities employment in the City. Additionally, few interviewees for this Beige Book entry expect that tax cuts will actually lead to more robust hiring. Instead, they intend to maintain their same, respective hiring paces for the short-term.

COMPARISON TO PREVIOUS FORECASTS

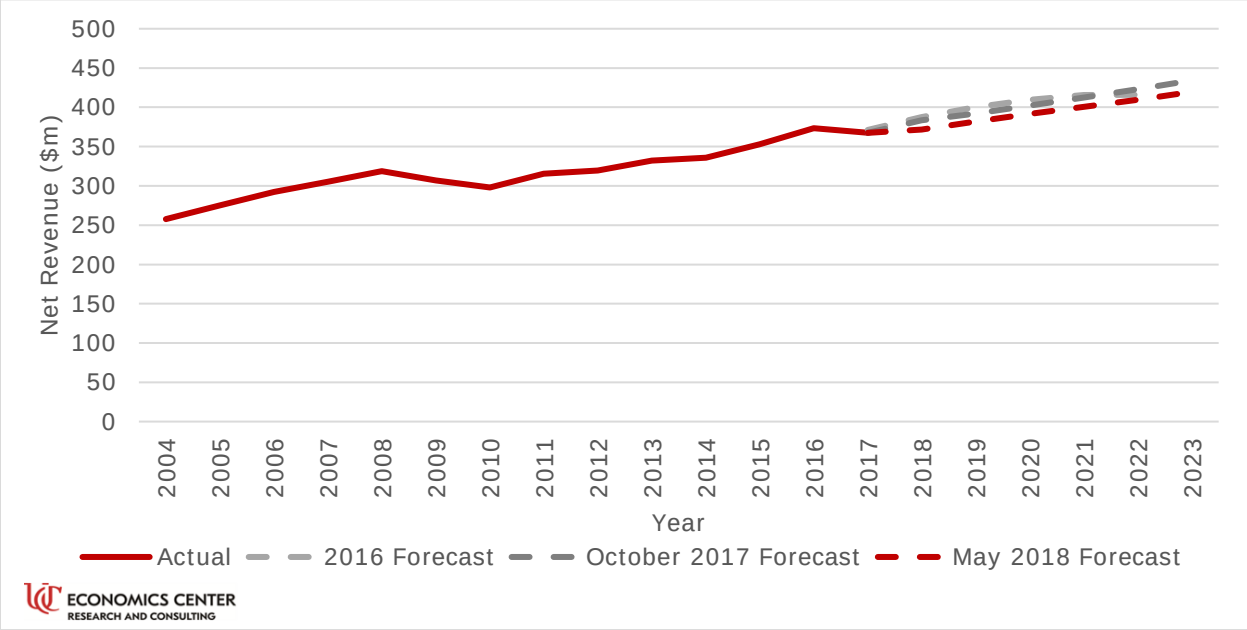
The Economics Center has conducted the analysis of the Cincinnati Income Tax Revenue Forecast for a number of years. Looking at historical forecasts and actual results can be useful in understanding how to contextualize and apply the findings as well as potential larger macroeconomic trends that may become apparent. The three forecasts being discussed are the 2016 Forecast of the revenues starting in 2017, the October 2017 forecast of the revenues starting in 2018, and the May 2018 forecast of the revenues with data through March 2018.

Looking back at the forecast conducted in 2016, the Economics Center forecasted that the 2017 totals would be approximately $371 million. The actual collections in 2016 were $368 million, or a difference of one percent. Moving forward, the 2016 forecast and 2017 forecast suggested moderate growth in their respective following years. The October 2017 forecast results projected approximately $384 million in net revenues, while the most recent forecast is projecting approximately $372 million, or a difference of 3 percent. The updated 2018 forecast presented in these findings includes the downturn from 2016 to 2017 as well as a handful of months that suggest a continued stagnation in 2018.

Figure 12 shows the actual collections from 2004 through 2017 and has the three forecasts shown by their expected future values. The trend in the forecasts suggests that as more data has become available, and collections continue to stagnate, we see a reduced growth rate. The 2016 forecast was the most optimistic, the 2017 was less optimistic, and the 2018 is the least optimistic in terms of growth. This trend follows the reality in terms of reduced actual collections.

[7] (James & James, 2018)
[8] (Cleveland, 2018)

Figure 12: May 2018 Comparison to Previous Forecasts (2016 & 2017)



Additionally, wages on average have stagnated within the City of Cincinnati. While historically wages increased at a relatively consistent rate between 2001 and 2017, the compound annual growth rate since 2012 has been less than one percent. This slowdown in wage growth contributes to a lower growth rate in the current forecast.

SUMMARY

The current six-year forecast for net income tax revenues for the City displays continued growth through FY 2023. Consistent with regional and national forecasts which anticipate slowed growth relative to a year ago, net income tax revenue projections for the City are slightly lower than those produced in 2016.

Revenue projections estimate net income tax revenue of $372 million for FY 2018, increasing to $420 million by FY 2023. Much of the growth is driven by Payroll Withholding, the largest source of income tax revenue. Payroll Withholding Net Revenues are forecasted to be approximately $314 million in FY 2018, growing to $360 million by FY 2023. Business Income Revenues are also projected to grow, but exhibit more volatility than payroll withholding while Individual Non-Withholding Revenues is projected to remain flat.

Workforce conditions in the City of Cincinnati continue to influence income tax revenues. Stagnant job growth, limited wage growth since 2012, and relatively stagnant population growth all contribute to lower expected revenues. Compared to forecasts one to two years ago, the Economics Center continues to expect growth in the collections, albeit at a slowed pace. Compound average annual revenue increases of approximately 2.5% will likely mirror inflation, resulting in nominal growth but little real growth.

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