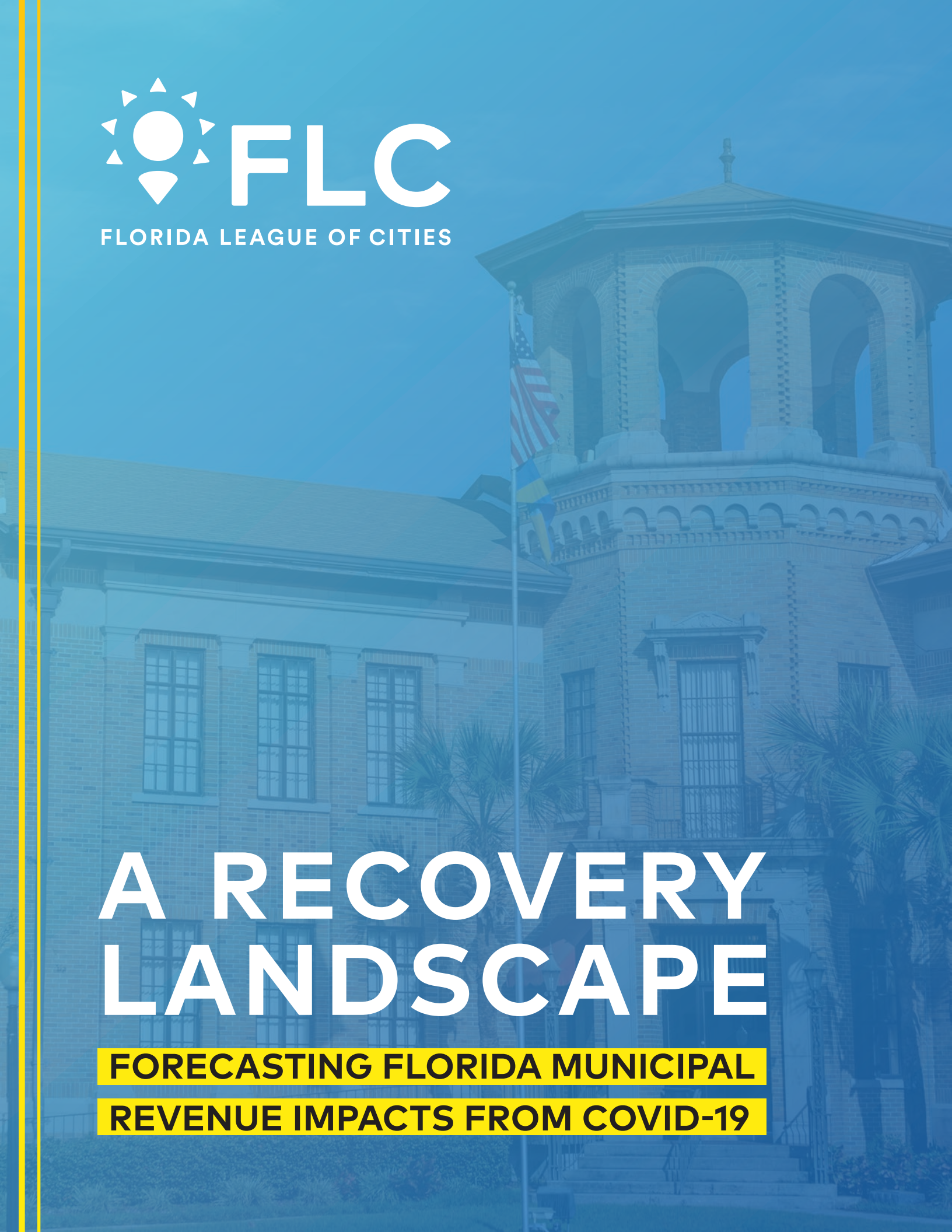

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A RECOVERY LANDSCAPE

FORECASTING FLORIDA MUNICIPAL REVENUE IMPACTS FROM COVID-19

FLC

FLORIDA LEAGUE OF CITIES

This report was written through the Florida League of Cities Center for Municipal Research by Local Governance Research, with David Gao, professor, Florida International University, and Can Chen, assistant professor, Florida International University, both of whom are participants in the League's university research partner program.

The views expressed and the data presented by contributors are not to be construed as having the endorsement of the Florida League of Cities unless so specifically stated.

This report forecasts municipal government revenue impacts in Florida from the COVID-19 pandemic and resulting economic downturn. It could be used as a fiscal planning tool to assist municipal managers in planning and adjusting revenues and expenditures during the economic recovery. This report models the relationships between local unemployment rates and specific categories of municipal revenues over the previous 11 years (2008 to 2018) to estimate the coefficients of their responsiveness to economic change. For most revenue categories, impacts from the pandemic are forecast by applying their historical economic responsiveness coefficient to unemployment estimates from the Florida Office of Economic and Demographic Research (EDR). Revenue forecasts are also generated by region and by municipal population size.

KEY FINDINGS

- Reductions in revenues from 2019 pre-pandemic levels for Florida cities in fiscal years 2021 through 2023 are forecast to total $3.90 billion. The decline each year is forecasted to be $1.72 billion in FY 2021, $1.29 billion in FY 2022 and $0.88 billion in FY 2023, as illustrated in the graph below.

TOTAL FORECAST REVENUE IMPACTS FOR FLORIDA MUNICIPAL GOVERNMENTS (IN BILLIONS)

FY2021	FY2022	FY2023
$(1.72)	$(1.29)	$(0.88)

- Even with a rebounding economy, municipal government revenues are forecast to be significantly less than their pre-pandemic levels for at least the next three fiscal years. For FY 2021, the percentage revenue decline for Florida municipalities is forecast to be 3.06%. The decline is forecast to be 2.79% in FY 2022 and 1.84% in FY 2023.
- The revenue impacts of the COVID-19 pandemic are predicted to vary by region. Municipalities in the southwest region of the state are expected to experience the greatest revenue decline – 5.62% in FY 2021 – and those in the southeast region are expected to experience the greatest declines in FY 2022 and FY 2023: 4.60% and 3.18% respectively.
- Cities with populations greater than 100,000 are forecast to experience the largest revenue declines: 6.09% in FY 2021, 4.61% in FY 2022 and 3.16% in FY 2023.

PURPOSE AND BACKGROUND

PURPOSE

The purpose of this report is to help cities plan and prepare for the potential impact of the COVID-19 pandemic on their portfolio of municipal government revenues. The report is the product of a series of focus groups with Florida municipal managers seeking to identify research priorities for local government through the COVID-19 pandemic and beyond. Forecasts for the pandemic's impact on local revenues were the highest priority identified by these managers. This report responds to this need with data and methods to forecast revenue changes across individual revenue sources down to the local level.

Forecasts are uncertain, even during stable times, due to possible unforeseen changes in conditions that arise. Although there is no crystal ball to forecast future revenues with certainty, this report uses the most current data available in a manner that can be updated and adjusted to account for evolving circumstances, local conditions and changes in federal and state financial assistance. Thus, this report is best viewed as a fiscal planning tool to assist municipal managers in planning and adjusting revenues and expenditures. Forecasts are based on revenue changes from FY 2019, the last year prior to the pandemic. For municipalities that experienced increased revenue in FY 2020, the forecast revenue declines may be understated. Local policymakers will have to make consequential policy choices during the recovery, which will require them to be informed by the best possible information, including revenue forecasts.

BACKGROUND

Like cities across the nation and the globe, Florida cities face an unprecedented event in the COVID-19 pandemic. Governor Ron DeSantis' stay-at-home order on April 1, 2020, led to an immediate reduction in demand by cutting off the supply of non-essential goods and services, which drove down employment, sales, income and more. While the restrictions have been mostly lifted, it remains unknown how long it will take for the economy to return to pre-pandemic levels and the daily lives of Floridians to return to normalcy. For example, Florida EDR's report of state revenue collections for August 2020 indicated a decline in monthly revenues of 4.6% compared with August 2019.

Florida cities do not yet know what "normal" will look like after the global pandemic or what the trajectory and duration of unemployment and business closures will be. Also unknown is how the pandemic will impact municipal tax bases and revenue streams, which further confounds our ability to predict the long-term impact of an economic downturn on revenues. Nevertheless, the pandemic has already had significant negative impacts on state, county and municipal revenues.

PURPOSE AND BACKGROUND

CHALLENGES OF REVENUE FORECASTING

Forecasting tax revenues during the COVID-19 pandemic is a challenging task. Traditional forecasting approaches such as time series models will likely lead to an underestimation of the revenue impacts in the short term and to an overestimation in the longer term. More credible results can be obtained if revenue forecasts are broken down by the specific revenue source and linked to the best available forecast of economic conditions and historical estimates of the responsiveness of individual revenues to economic changes.

The COVID-19 pandemic has already resulted in major declines in municipal revenues in ways unique to this crisis. The need for social distancing has distinct effects on the tax base, tax administration and taxpayer compliance. Furthermore, the pandemic and its aftereffects may affect the structure of local economies more permanently. Although forecasting government revenue changes under these circumstances is challenging, it is also critically important. Some uncertainty in forecasts is unavoidable, given unknowns in the progression and duration of the pandemic, the length of time restrictive measures will be in place and uncertainty in the forecasts of key macroeconomic variables. However, revenue forecasts can make full and consistent use of available data and assumptions about the pandemic and its resulting economic impact to avoid adding unnecessary biases or relying on foreseeably inappropriate methods. Experience from past pandemics offers limited guidance. These outbreaks differed significantly from COVID-19, with SARS having very limited community spread and H1N1 very low mortality, so neither led to widespread social distancing measures.

EXISTING KNOWLEDGE

Local governments have had limited information available on revenue impacts to assist them in revenue and expenditure planning. What information has been available tends to focus on only a small subset of revenue sources or only cover the current fiscal year. At the state level, EDR provides comprehensive historical data on Florida local governments and, through its revenue estimating conferences, provides revenue forecasts for the coming fiscal year including a detailed forecast of sales-based revenues and revenue-sharing allocations.

At the national level, an academic study by Chernick, Copeland and Reschovsky (2020) forecast the potential fiscal impacts of the COVID-19 on 150 fiscally standardized cities. They included property, sales and income taxes, fees and charges, and intergovernmental aid. Their sophisticated forecasting methods predicted a shortfall in revenues of 9% under a more severe pandemic scenario and variation of revenue shortfalls across cities, depending on differences in revenue structures and the fiscal conditions. The National League of Cities' May 2020 Fiscal Impact of the Pandemic Recession on Cities, Towns and Villages offers a comprehensive analysis and forecast of municipal revenue declines from the COVID-19 pandemic. The NLC study estimates revenue impacts based on the responsiveness of specific revenues to changes in unemployment rates.[i]

Our report draws from the NLC study by identifying revenue responsiveness to changes in the unemployment rates as a component of our forecasts. It takes advantage of state-level unemployment forecasts developed by EDR and Florida's standardized revenue and reporting systems to model the relationships between county unemployment rates and municipal revenues during the previous 11 years to construct more realistic estimates of revenue responsiveness to unemployment for 21 categories of revenues. Utilizing monthly county unemployment reports and state-level unemployment forecasts developed by EDR, unemployment forecasts at the county level are decomposed and linked to the revenue responsiveness coefficients for each individual revenue stream to construct a forecast of revenue impacts for each Florida municipal government. The following sections describe the data and analytic methods employed to forecast how municipal revenues may be impacted by economic changes resulting from the COVID-19 pandemic.

DATA AND METHODS

MUNICIPAL REVENUE STRUCTURE

Because there is great variation among Florida municipalities in their revenue structures, the timing and sum of the coronavirus pandemic's impact on revenues will depend on a municipality's relative dependence on specific revenue sources for funding their services.

TABLE 1: REVENUE TYPES AND CATEGORIES[ii]

REVENUE TYPE	REVENUE CATEGORY
Taxes	Property tax
	Local option fuel tax
	Discretionary sales surtaxes
	Communication services tax
	Half-cent sales tax
	Other taxes
Permit and fees	Building permits
	Other permit and fee (Assessment/impact/franchise fees)
Charges	General government
	Public safety
	Physical environment
	Transportation
	Economic environment
	Human services
	Culture/recreation
	Other charges
Judgment and fines	Judgments
	Fines
Miscellaneous	Contributions from private sources
	Other miscellaneous
Other	Other resources

Table 1 identifies the municipal revenue categories used for the analyses in this report. There is great uncertainty regarding future intergovernmental grants as well as aid to municipal governments to address the COVID-19 pandemic and the resulting economic impacts. Intergovernmental revenues that are allocated competitively or by formulas not directly linked to the local unemployment level are not included in the analyses. Total, rather than general, revenues are used for the analyses since the focus extends beyond the current fiscal year, and revenue funds other than general revenues will be significantly impacted by changes in the local economy.

For the revenue categories in each municipality, we calculate revenue shares based on the percentage of the total revenues across all categories accounted for by each specific revenue category in Table 1. This captures the variation in revenue structures across municipal governments in Florida and provides a basis for weighting the effects of each type of revenue on the potential overall revenue impacts resulting from the pandemic. Table 2 on page 6 summarizes the extent of variation in municipal revenue structure, reporting the mean and standard deviation for each revenue source along with the 25th, 50th (median) and 75th percentiles.

Table 2 reveals great variation among cities in their revenue structures. For example, property taxes account for less than 11% of revenues in about one-fourth of Florida municipalities but account for more than 28% in another quarter. Moreover, some jurisdictions are heavily reliant on a single revenue source.

DATA AND METHODS

TABLE 2: VARIATION IN MUNICIPAL REVENUE STRUCTURES

REVENUE CATEGORY	MEAN	SD	25%	MEDIAN	75%
Property tax	21.73%	16.91%	10.73%	17.98%	27.75%
Local option fuel tax	2.78%	3.60%	0.82%	1.59%	3.12%
Discretionary sales surtaxes	3.41%	5.44%	0.00%	0.78%	4.97%
Communication service taxes	1.70%	1.66%	0.96%	1.47%	1.94%
Half-cent sales tax	4.22%	3.21%	2.03%	3.42%	5.37%
Other taxes	5.50%	3.96%	3.00%	5.18%	7.29%
Building permits	2.38%	3.31%	0.12%	1.52%	3.25%
Other permits and fees (assessment/impact/franchise)	7.35%	6.10%	3.29%	6.07%	9.52%
Charges	34.00%	20.00%	20.00%	36.00%	48.00%
Court Judgments	0.39%	1.84%	0.00%	0.10%	0.25%
Fines	0.42%	1.13%	0.00%	0.10%	0.39%
Contributions-private sources	0.54%	2.88%	0.00%	0.05%	0.25%
Other miscellaneous	4.85%	-6.34%	1.90%	3.63%	5.37%
Other sources	10.94%	12.71%	1.41%	7.26%	15.08%

For optional sales taxes and other municipal taxes collected at the state level, we gathered monthly data on revenue collections through August 2020 as reported by the Florida Department of Revenue's *Revenue Collection Reports*, and we used these as the basis for estimating those revenue streams.

UNEMPLOYMENT RATES

For each of Florida's 411 municipal governments, we collected the county-level unemployment rates from 2008 to 2018 from the U.S. Bureau of Labor Statistics. Economic analyses typically consider the county or metro area, rather than the city itself, as the employment shed for a city. Additionally, unemployment is measured at the county level due to the lack of availability of city-level data for the entire time range we examined. The historical revenue and unemployment data are merged as an 11-year panel data set with 4,521 observations.

This report uses EDR's forecasts of unemployment rate levels over the next three fiscal years, as reported from the economic estimating conference in November 2020. The forecast unemployment rates are 7.9% for 2020, 5.7% for 2021 and 4.9% for 2022. The increase in the forecast unemployment rates over the actual county-level unemployment rates for 2019 serves as the basis for our estimate of increased unemployment each year resulting from the pandemic. County-level unemployment data was available for the first 10 months of 2020 to provide the county-level estimate for that year. Because the EDR unemployment forecasts for 2020 and 2021 are at the state level, we estimated county-level differences from state rates based on the ratio of the county to state unemployment rates using the monthly county unemployment in 2020. For 2022 unemployment, the April-November county unemployment was used in the ratio calculations. For 2022, ratios are based on January-March and August-November. Calculations for a sample county are provided in Appendix A as an example.

The unemployment rate forecast in July by EDR depicted a worse scenario with the projected rate of 9.0%, 7.7% and 6.9%, respectively, for 2020,

2021 and 2022. The University of Central Florida (UCF) Institute for Economic Forecasting also constructed forecasts of unemployment in Florida as part of its *2020-2023 Florida and Metro Economic Report*. The annual unemployment forecasts were updated in August and November 2020 to account for the ongoing development of the COVID-19 pandemic, recession and recovery.

The UCF unemployment rates forecast issued in November are 5.2% for 2020, 3.5% for 2021 and 2.8% for 2022. These unemployment forecasts, which are lower than those generated by EDR, offer a relatively less severe economic scenario for Florida. Calculating county-level unemployment estimates based on the EDR and UCF state-level unemployment forecasts provides alternative economic scenarios from which to generate revenue forecasts.

CONSTRUCTION OF MUNICIPAL REVENUE UNEMPLOYMENT RESPONSIVENESS COEFFICIENTS

The initial step in the construction of city revenue unemployment responsiveness coefficients (URCs) was to combine the database of local unemployment with the revenue shares data for each municipal government from 2008 to 2018. We then conducted a statistical analysis to estimate URCs by applying panel regression analysis to estimate the relationships between unemployment and each revenue source. Appendix B reports the URCs derived from the regression analyses. In instances in which a coefficient does not achieve a statistical significance at the 5% level, we assume its value is zero. Therefore, unemployment does not significantly affect revenues generated from this source.

REVENUE FORECAST RESULTS

ASSUMPTIONS OF THE ANALYSIS

Several important assumptions need to be made before calculating the revenue forecasts. First, we assume that there will be no property value decline in FY 2021 due to assessments being based on the previous year's valuation and a strong residential housing market through the first three quarters of 2020. The analysis also assumes that the property tax rate in effect in 2020 remains unchanged, as property tax rollback data was not available at the time the analysis was conducted. Future reports will provide updated property tax revenue forecasts that account for property tax rollbacks implemented for FY 2021.

Second, as described in the previous section, in adjusting municipal revenues based on the historical responsiveness to county-level unemployment rates, we assume no declines due to economic changes for revenues for which the URC did not achieve statistical significance in the regression analyses.

Third, we use a separate procedure for the specific sales-based revenues collected at the state level. The reasons are that the lag between economic changes and revenues is shorter and they have been dramatically impacted by social distancing requirements implemented in response to the pandemic. We forecast changes in revenue distributions to the local governments from these sources based on the difference between EDR's forecast for FY 2021 and the estimated distributions in FY 2020. We use the change from FY 2020 to FY 2021 as the base to forecast future changes in these revenues. We assume 75% of the 2021 decline for FY 2022 and 50% of the FY 2021 decline for FY 2023. These assumptions offer our best estimates based on the most recent revenues, and the estimates can be adjusted and revised as additional data becomes available.

Forecasts of revenue impacts will vary depending on the severity and duration of the recession. The primary projections of revenue impacts presented here were generated based on the unemployment forecasts produced by EDR. This reflects the most likely scenario based on available data. We also generate two alternative scenarios for comparison:

- A less severe economic downturn based on the unemployment forecast generated by the UCF Institute for Economic Forecasting.
- A more severe economic downturn based on the unemployment rates forecast by EDR in July 2020.

In the following analyses, forecast revenue changes are presented for all municipal governments in Florida, followed by separate analysis for eight geographic regions and five categories of population size.

RESULTS: REVENUE IMPACTS FOR ALL MUNICIPAL GOVERNMENTS

Table 3 reports the revenue impacts for all municipal governments in Florida. For FY 2021, the mean revenue change from FY 2019 for Florida municipalities is forecast to be a decline of 3.06%. The results

REVENUE FORECAST RESULTS

indicate that more than 25% of Florida cities are expected to see a revenue decline of more than 4.7% in FY 2021. Although the impact is somewhat less, it is still quite substantial for FY 2022, with an average revenue decline of 2.79%, and half of all municipalities are forecast to experience revenue declines of 2.37% or more. Revenue impacts will continue through FY 2023, with an average decline of 1.87%.

TABLE 3: MUNICIPAL REVENUE IMPACTS DUE TO COVID-19 FY 2021-2023

VARIABLE	NUMBER	MEAN	STD. DEV.	MIN	MAX	25%	50%	75%
FY 2021	411	-3.06%	3.58%	-20.5%	5.95%	-4.67%	-2.48%	-0.67%
FY 2022	411	-2.79%	2.63%	-16.38%	4.98%	-3.95%	-2.37%	-0.95%
FY 2023	411	-1.87%	1.84%	-10.17%	2.08%	-5.44%	-1.54%	-0.67%

Note: Reductions in revenues are from 2019 pre-pandemic levels.

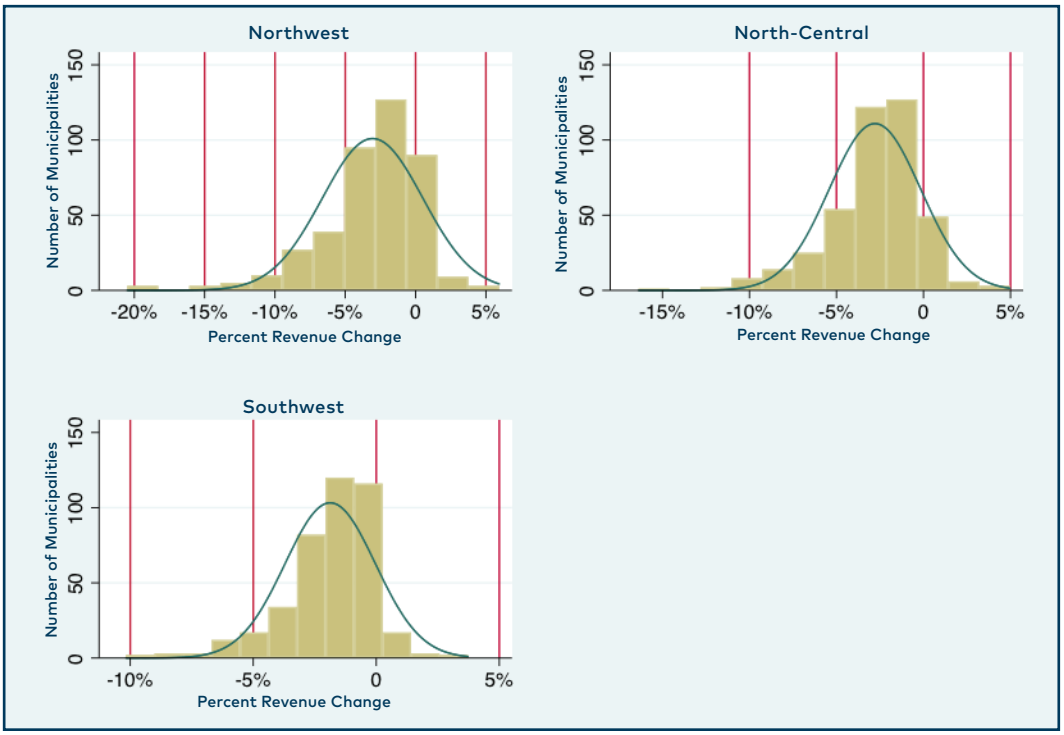
Since revenue forecasts are quite sensitive to assumptions of economic conditions, we also provide comparisons based on two alternative scenarios described earlier. Table 4 compares the more severe downturn scenario of EDR's July unemployment forecasts with the less severe economic scenario based on the UCF generated unemployment forecast in November. The forecast revenue declines are the same for FY 2021 among all three scenarios since the unemployment rate used in the projection is the actual average unemployment rate of January-November 2020. Under the more severe economic downturn scenario, the decline rises to 4.55% in FY 2022 before dropping to 3.69% in FY 2023. Under the less severe scenario, the decline is 0.85% in FY 2022 and 0.05% in FY 2023.

TABLE 4: PERCENT REVENUE IMPACT IN MUNICIPALITIES UNDER ALTERNATIVE SCENARIOS

VARIABLE	MOST LIKELY SCENARIO (EDR) MEAN CHANGE	MOST SEVERE ECONOMIC DOWNTURN MEAN CHANGE	LESS SEVERE UCF ECONOMIC SCENARIO MEAN CHANGE
FY 2021	-3.06%	-3.06%	-3.06%
FY 2022	-2.79%	-4.55%	-0.85%
FY 2023	-1.87%	-3.69%	-0.05%

REVENUE FORECAST RESULTS

FIGURE 1: COVID-19-INDUCED REVENUE CHANGE FOR ALL MUNICIPALITIES



The graphs in Figure 1 present the comparisons of revenue impacts due to the COVID-19 pandemic. The three panels of this figure graph report the distribution of the number of municipal governments experiencing different levels of revenue impacts in each of the three fiscal years.

In the upper left panel, a wide variation of revenue change due to COVID-19 is reported for FY 2021. (The standard deviation is 3.58%.) The largest municipal revenue impact is 20.5%. By contrast, some municipalities may not have revenue decline or may have a small revenue increase in FY 2021 as shown in our forecast. The reasoning is that several revenue categories have a slight positive response to the unemployment rate change, such as physical environment charges (utility charges), other charges and fines. In the municipalities that were forecast to experience a revenue increase, the amount of revenues in these three categories is more than 50% of total revenues.

The distribution of revenue impacts largely clusters within the 0% to -8.0% interval, which suggests that in FY 2021, most municipalities' revenues will not be more than 8% below their pre-pandemic levels. The upper right panel shows the distribution of revenue impacts on Florida municipalities in FY 2022. Compared with FY 2021, variation in revenue change is smaller for FY 2022. Revenue changes are forecast to range from 4.98% to -6.38%, but most governments will face revenues 0-6% lower than before the pandemic.

The bottom left panel presents the distribution of revenue impact for municipalities in FY 2023. Compared with FY 2021 and FY 2022, variation in revenue change is smaller in FY 2022. (Standard deviation is 1.84%.) Revenue impacts are predicted to range from 2.08% to -10.17% in FY 2023, with most municipalities experiencing reductions between 0% and 4% from their pre-pandemic levels.

REVENUE FORECAST RESULTS

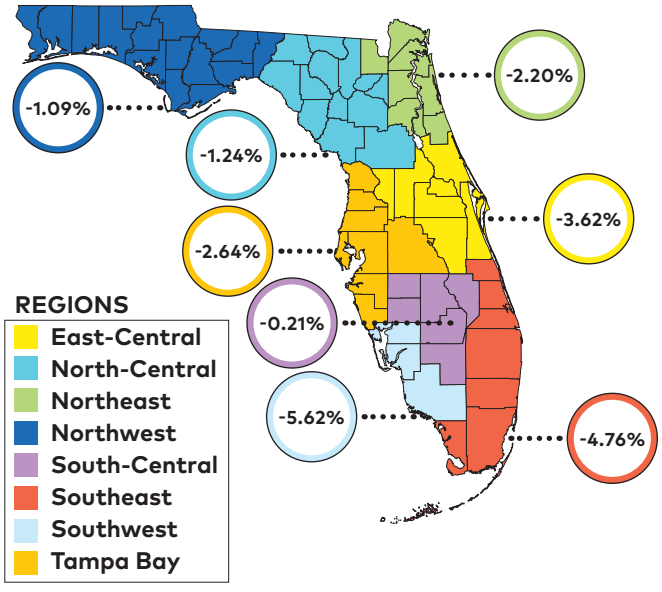
REVENUE IMPACTS BY REGION

The analysis next examines the patterns of revenue impacts for the eight geographic regions of Florida defined in the maps below in Figures 2-4 with each figure corresponding to one of the three fiscal years forecast. For FY 2021, there is a wide variation in revenue decline across regions. The rankings of the magnitude of COVID-19-induced average revenue decline in descending order are as follows:

- Southwest (light blue).
- Southeast (red).
- East-Central (yellow).
- Tampa Bay (gold).
- Northeast (green).
- North-Central (medium blue).
- Northwest (dark blue).
- South-Central (purple).

The Southwest region is forecast to experience the most severe revenue decline induced by COVID-19: 5.62%. In contrast, the South-Central region (dark blue) will experience only about 0.21% revenue shortfall in FY 2021 induced by COVID-19.

FIGURE 2: REVENUE IMPACTS BY REGION INDUCED BY COVID-19 (FY 2021)



The regional rankings of revenue impacts in FY 2022 and FY 2023 induced by COVID-19 change slightly, as reported in Figure 3 and Figure 4. The southeast becomes the region that will experience the most severe revenue declines in FY 2022 and FY 2023, 4.66% and 3.18% respectively. The southwest region ranked second in severity of decline in FY 2022 and FY 2023.

FIGURE 3: COVID-19-INDUCED REVENUE IMPACTS BY REGION (FY2022)

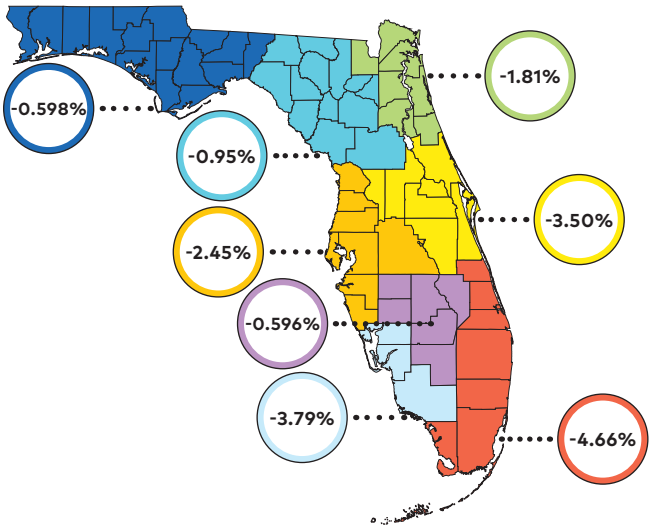
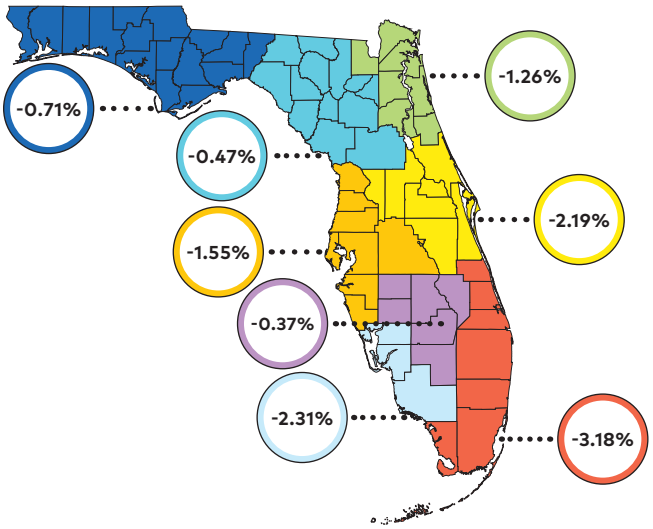


FIGURE 4: REVENUE IMPACTS BY REGION INDUCED BY COVID-19 (FY2023)



REVENUE FORECAST RESULTS

Figure 5 graphically summarizes the regional differences in the three-year trend of impacts of COVID-19 across regions. The south-central region suffers the least impact throughout the period of economic decline. The southwest region is anticipated to experience the greatest revenue shortfall in FY 2021, with the largest decline from pre-pandemic revenue levels forecast to occur in FY 2021 (5.62%). This region's revenue picture is forecasted to improve significantly in FY 2022 to a -3.79% impact and continue to improve to a -2.31% impact in FY 2023. The southeast region ranks second in terms of revenue decline in FY 2021; however, the declines in FY 2022 and FY 2023 are projected to surpass the southwest region and exhibit the worst decline. The east central and Tampa Bay area share a similar pattern with the southeast region as the decline slightly improves in FY 2022 then shows a modest improvement in FY 2023. In north Florida, the projected revenue decline in the northeast region is worse than that in northwest and north-central. The south-central region suffers the least impact throughout the period of economic decline. The northwest is another area that has less impact, with a slightly bigger decline in FY 2021 and a similar level of decline in FY 2022 and FY 2023 with the south-central region.

FIGURE 5: THREE-YEAR TREND OF PROJECTED REVENUE IMPACTS BY REGION

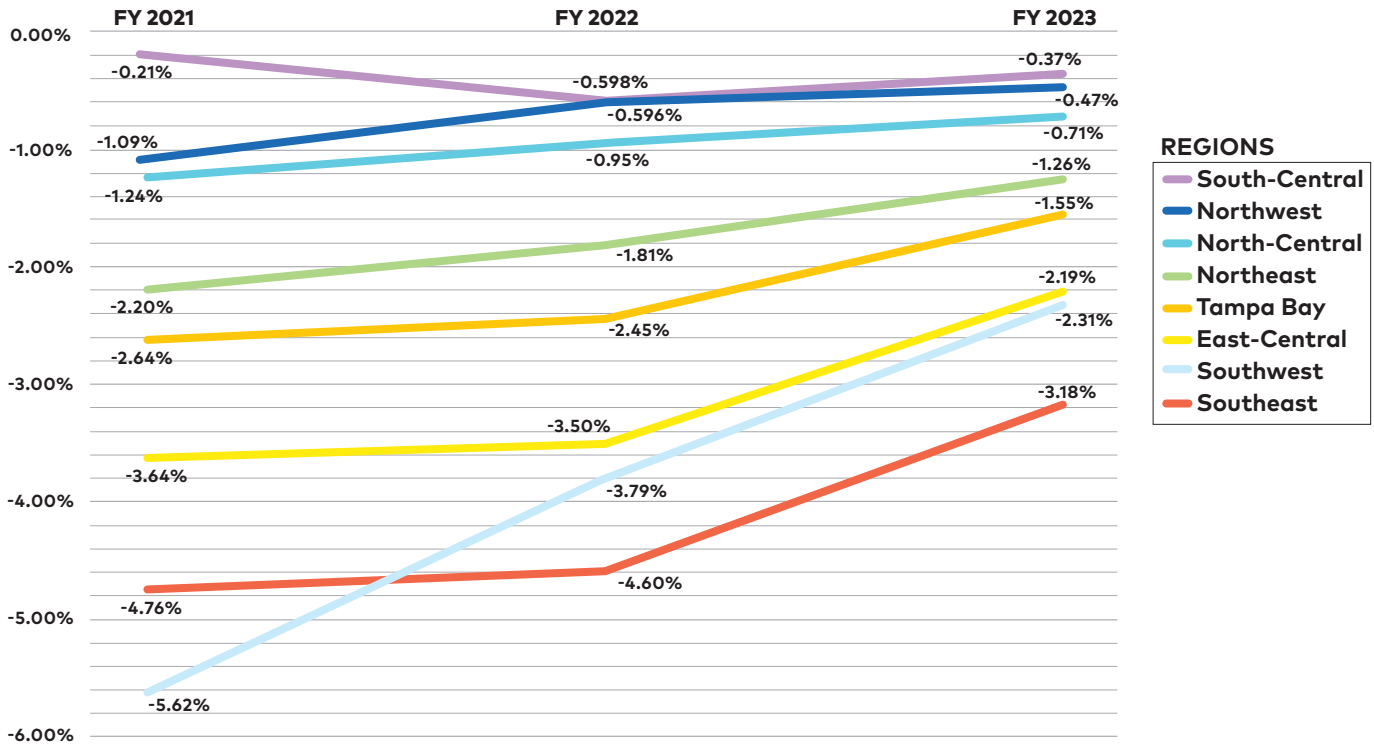


Figure 6 on page 13 presents histograms displaying the number of Florida municipal governments in each region predicted to experience different levels of revenue impacts each year. Revenue declines in the southwest region have the largest standard deviation, suggesting greater variation in revenue declines induced by COVID-19 among municipalities within this region than in others. In contrast, most municipalities in the south-central region, with the smallest standard deviation, will experience revenue impacts of about the same magnitude.

REVENUE FORECAST RESULTS

FIGURE 6: NUMBER OF CITIES EXPERIENCING REVENUE IMPACTS BY REGION FY 2021

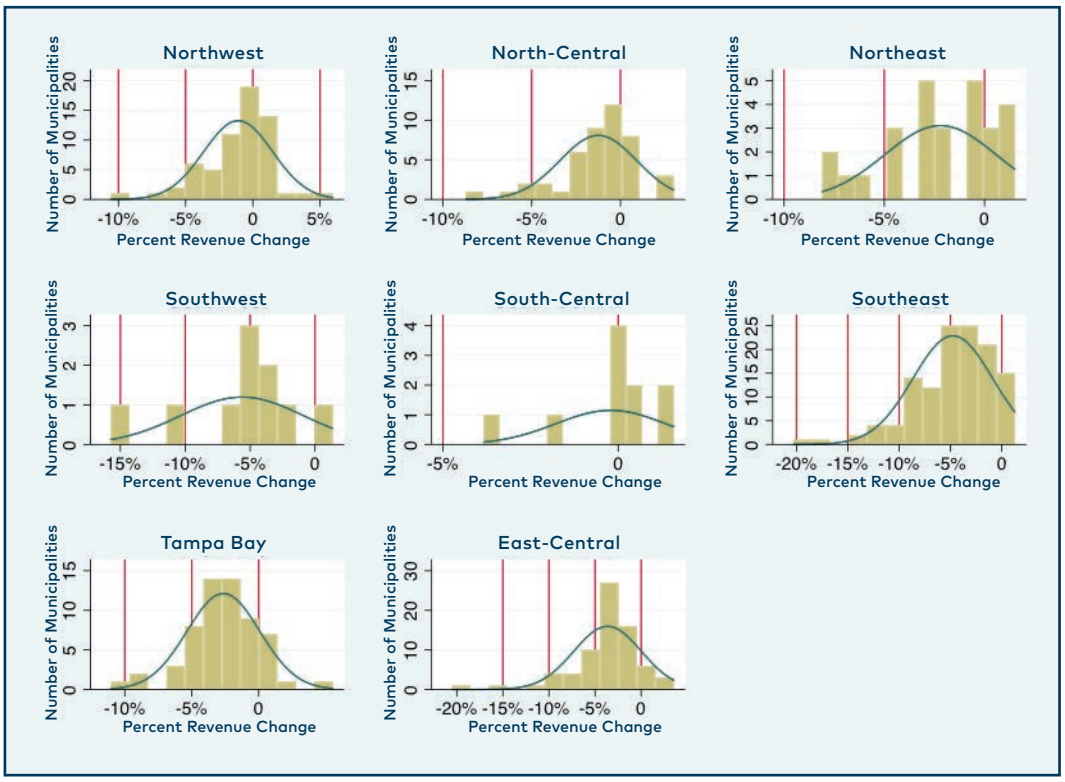
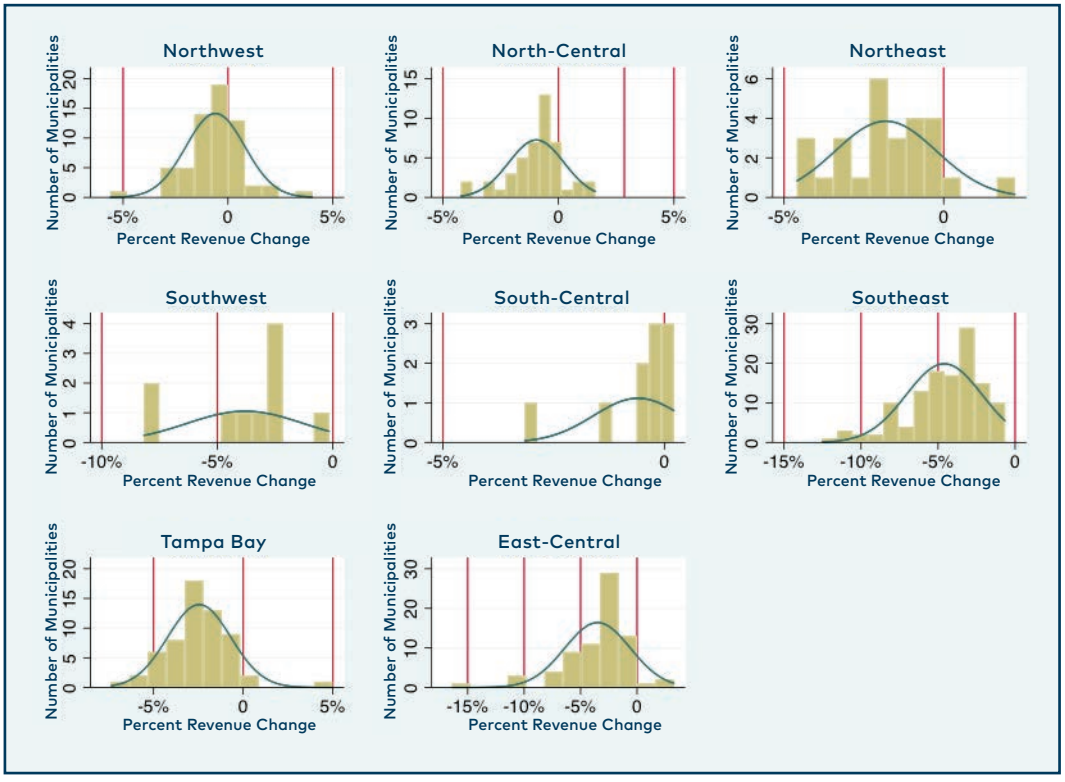
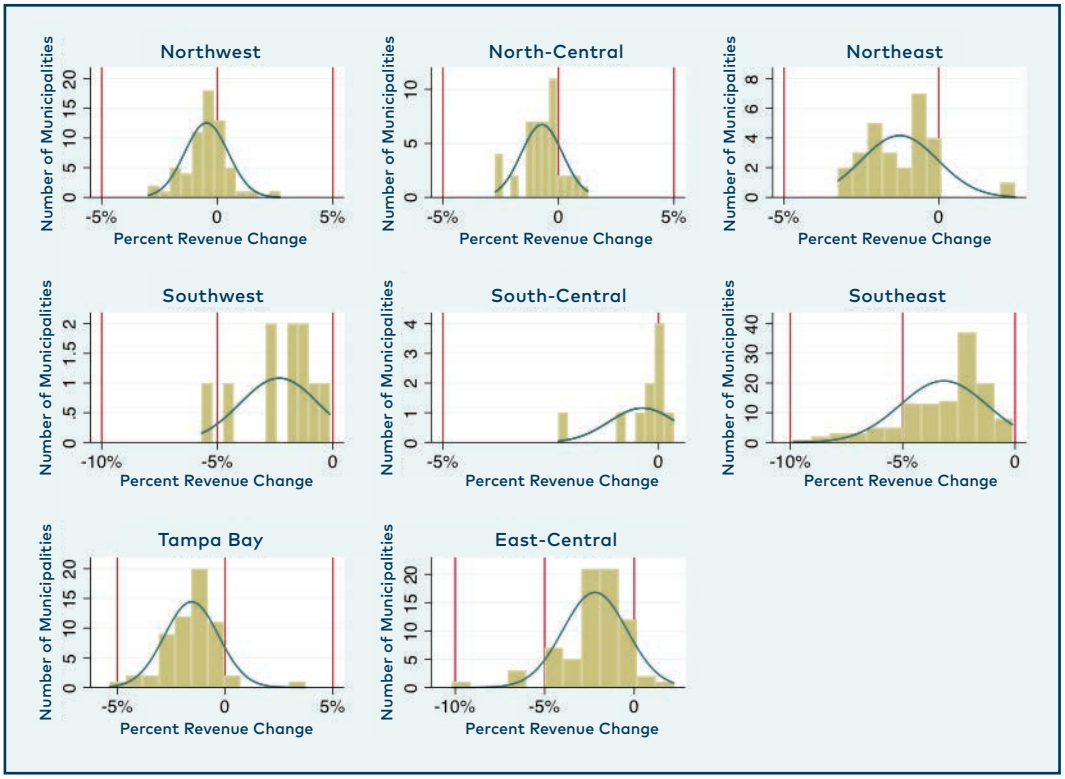


FIGURE 7: NUMBER OF CITIES EXPERIENCING REVENUE IMPACTS BY REGION FY 2022



REVENUE FORECAST RESULTS

FIGURE 8: NUMBER OF CITIES EXPERIENCING REVENUE IMPACTS BY REGION FY 2023



REVENUE-IMPACT RESULTS BY CITY SIZE

We next examine differences in revenue-impact forecasts based on the size of the municipality. Table 5 reports the forecast revenue impacts from COVID-19 for five groupings of population size. The percent decline in revenues is positively related to population size, with small cities experiencing the least revenue impacts and larger cities the greatest impacts. For FY 2021, cities of less than 5,000 population are anticipated to experience a 2% reduction in revenues, but for cities with populations greater than 100,000, the reduction of revenues is forecast to be 6.1%.

TABLE 5: REVENUE IMPACTS INDUCED BY COVID-19 BY POPULATION SIZE

MUNICIPALITY	FY 2021	FY 2022	FY 2023
<5,000	-2.00%	-2.22%	-1.51%
5,001-15,000	-3.14%	-2.71%	-1.79%
15,001-60,000	-3.94%	-3.27%	-2.16%
60,001-100,000	-4.79%	-3.91%	-2.65%
>100,000	-6.10%	-4.61%	-3.16%
Average	-3.06%	-2.79%	-1.87%

Figures 9-11 present histograms displaying the number of governments in each population group experiencing varying levels of revenue impacts each year. Even though the average decline is the smallest in municipal governments with a population less than 5,000, there is a great deal of variation. The smallest standard deviation

in revenue impacts for all three years is for cities with a population between 15,000 and 60,000. This implies that most municipalities within this population range will experience revenue impacts of about the same magnitude. High levels of variation are forecast in revenue impacts for all three years among municipal governments with a population between 60,000 and 100,000.

FIGURE 9: REVENUE IMPACTS INDUCED BY COVID-19 BY POPULATION SIZE FY 2021

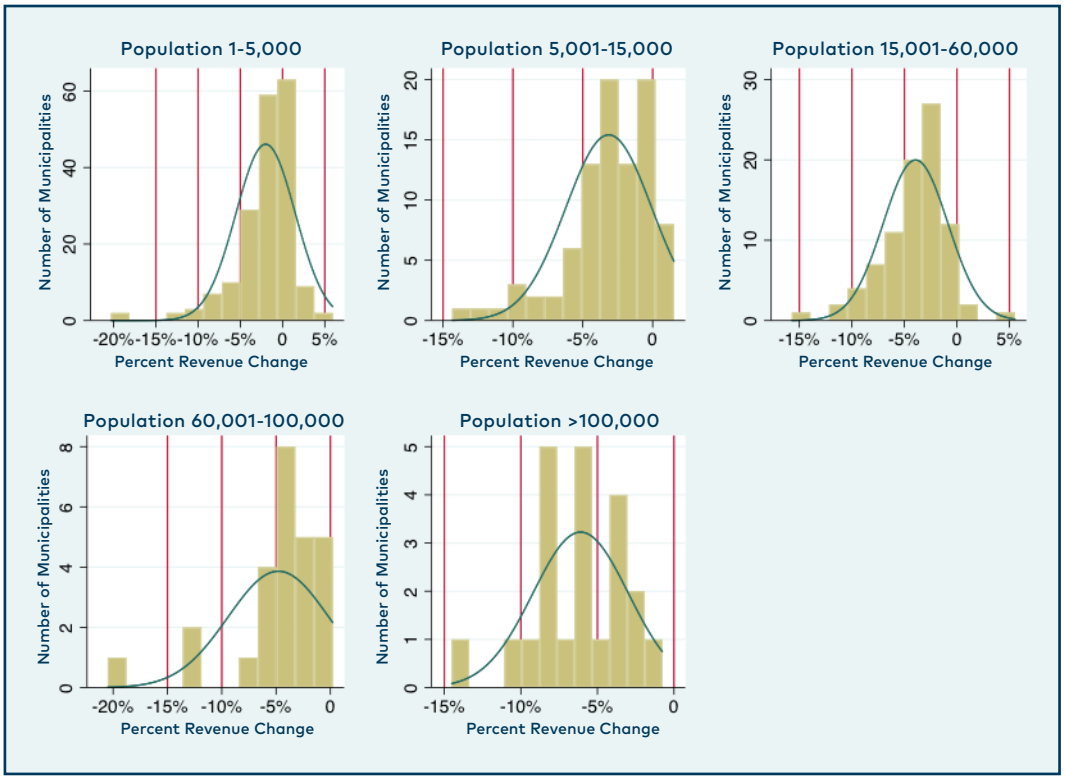


FIGURE 10: REVENUE IMPACTS INDUCED BY COVID-19 BY POPULATION SIZE FY 2022

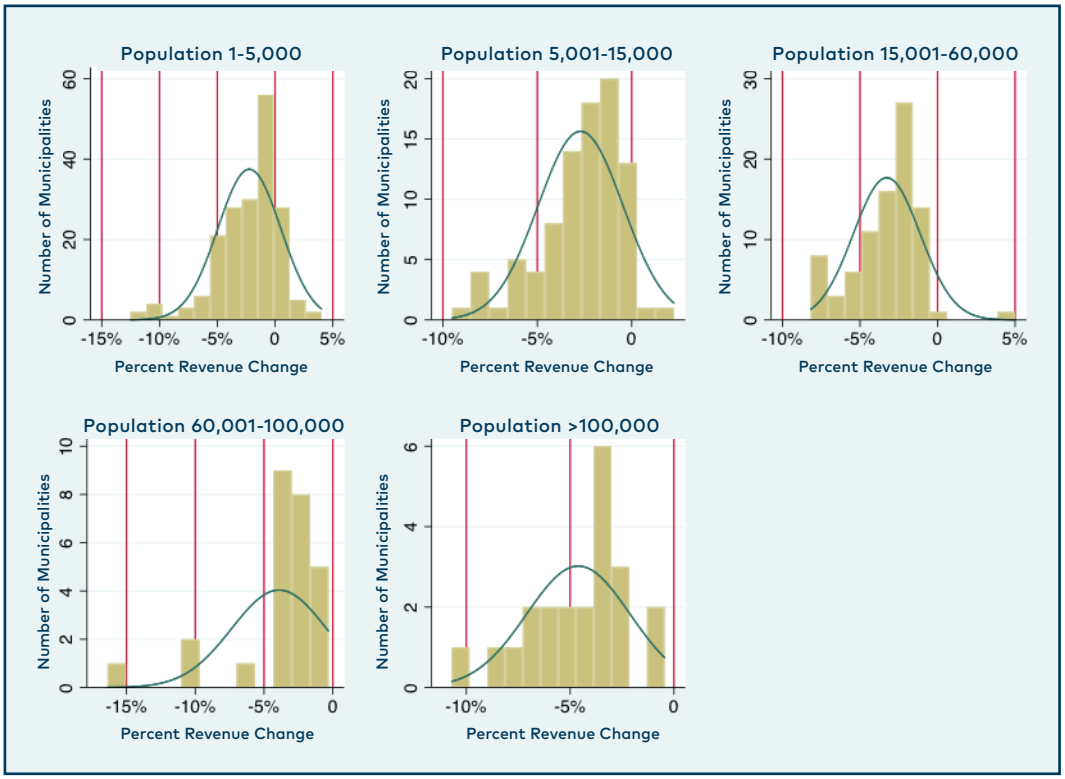
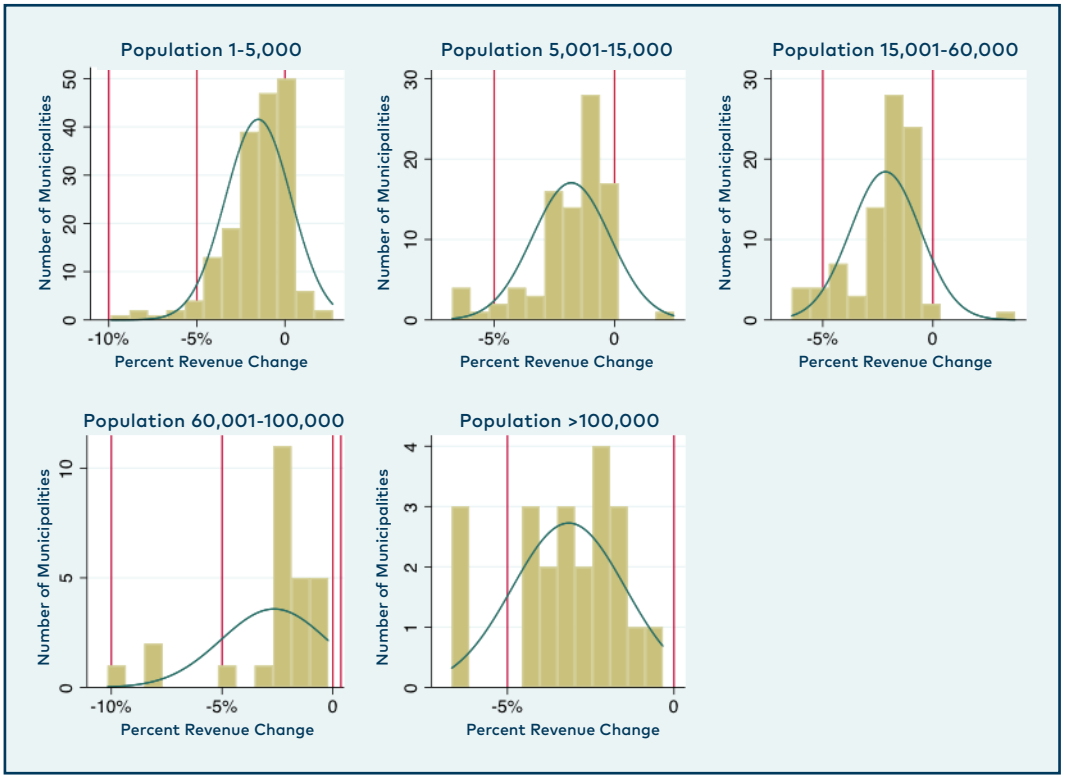


FIGURE 11: REVENUE IMPACTS INDUCED BY COVID-19 BY POPULATION SIZE FY 2023



CONCLUSION

Municipal managers need forecasts of potential revenue impacts of the COVID-19 pandemic to plan and budget for future years and adjust revenues and expenditures as necessary during the period of economic downturn and recovery. This report offers forecasts of municipal government revenue impacts from the COVID-19 pandemic for all Florida municipalities and breaks down the forecasts to identify impacts by region and population size.

One thing that is clear from these analyses is that the revenue impacts of the COVID-19 pandemic on Florida municipal governments will extend well beyond this fiscal year, with significant revenue declines likely to continue through at least FY 2023. Total revenue declines for all Florida municipal governments from the FY 2021 through FY 2023 are forecast to be $3.9 billion. The decline each year is forecast to be $1.72 billion in FY 2021, $1.29 billion in FY 2022 and $0.88 billion in FY 2023.

Even with a rebounding economy, municipal government revenues are forecast to be significantly less than their FY 2019 pre-pandemic levels for at least the next three fiscal years. In percentage terms, for FY 2021 the average revenue decline for Florida municipalities is forecast to be 3.06%. For FY 2022, the decline is forecast to be 2.79% and 1.87% in FY 2023.

The revenue impacts of the COVID-19 pandemic are predicted to vary by region. Percent revenue declines for governments in the southwest region of the state are expected to be the greatest in FY 2021 with revenues 5.62% less than the previous year. The anticipated revenue decline in the southeast region surpasses the southwest region in FY 2022 and FY 2023. The pandemic, economic downturn and recovery will affect the revenues of all Florida municipalities regardless of size, but cities with populations greater than 100,000 are forecast to experience the largest revenue declines.

Expenditure reductions are the most direct mechanisms for addressing local revenue shortfalls, as reflected in the recently passed budgets for FY 2021. Nevertheless, there is clear evidence demonstrating that governments that cut their public spending after the Great Recession fared worse in the following years than those that increased spending in that period (Mohler 2020). Thus, local leaders must continue to pursue federal relief funding while strategically planning, monitoring cash flows and doing their best to generate additional revenues.

REFERENCES AND NOTES

REFERENCES

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NOTES

[i] The NLC study used national unemployment forecasts from the Congressional Budget Office to forecast changes in revenue for each 1% forecast change in additional unemployment due to the pandemic. It follows a model developed by the W.E. Upjohn Institute for Employment Research (Bartik 2020) that estimates state and local revenue responsiveness to unemployment. At the state level, a one percentage point increase in the national unemployment rate is assumed to results in a 4.1% state budget shortfall (Fiedler and Powell 2020). NLC assumed that this 4.1% reduction in revenues for each 1% unemployment increase applied for sales and income taxes. Since property tax revenue impacts are less immediate as the taxable values are based on the previous year's assessment, property tax revenues were assumed to be half as responsive to economic unemployment as sales and income tax revenue. The responsiveness of revenues from charges, fees and miscellaneous revenue to unemployment rates was assumed to be 75% of the change in sales and income taxes.

[ii] The definitions summarized in Table 1 were obtained from the State of Florida's *Uniform Accounting System Manual for Florida Counties* (2014 Edition), which is available at *https://www.myfloridacfo.com/Division/AA/Manuals/2014UASManual-7-31-15_FINAL.pdf*.

[iii] For the available years, coefficients of revenue responsiveness were estimated for cities and counties, and differences were found to be modest.

[iv] The estimation of the unemployment responsiveness coefficient does not consider other factors unique to each city such as demographic composition, policy changes or economic base.

[v] The estimated distribution to local governments of Local Discretionary Sales Surtaxes, Local Option Fuel Taxes, local government half-cent sales tax and communications services taxes are retrieved from 2020 and 2019 *Local Government Financial Information Handbook*.

APPENDIX A

EXAMPLE OF CALCULATION OF COUNTY TO STATE UNEMPLOYMENT RATE RATIOS

(a)

MONTH 2020	FLORIDA UNEMPLOYMENT	COUNTY UNEMPLOYMENT		FLORIDA UNEMPLOYMENT	COUNTY UNEMPLOYMENT	RATIO
January	3.0%	2.9%				
February	2.8%	2.7%	Average for Months 1-11	7.9%	5.3%	0.66
March	4.3%	3.8%				
April	13.5%	8.8%	Average for Months 1-3, 8-11	5.4%	3.9%	0.72
May	13.5%	8.0%				
June	10.7%	6.5%				
July	11.6%	7.6%				
August	7.6%	4.8%				
September	7.2%	4.0%				
October	6.4%	4.3%				
November	6.3%	4.7%				

(b)

YEAR	EDR FORECAST OF FLORIDA UNEMPLOYMENT [RATIO]	FORECAST OF UNEMPLOYMENT STATE UNEMPLOYMENT COUNTY/STATE RATIOS
FY 2022	5.7% [.66]	3.7%
FY 2023	4.9% [.72]	3.5%

APPENDIX B

UNEMPLOYMENT RESPONSIVENESS COEFFICIENTS

Taxes	Property tax	-1.94%
	Local option fuel tax*	-0.27%
	Discretionary sales surtax*	-2.44%
	Communication services tax*	0.00%
	Half-cent sales tax*	-1.84%
	Other taxes	0.00%
Permit and fees	Building permit	-5.06%
	Other (assessment/impact/franchise)	0.00%
Charges	General government	-4.15%
	Public safety	-2.10%
	Physical environment	1.03%
	Transportation	0.00%
	Economic environment	0.00%
	Human services	-2.87%
	Culture/recreation	-0.67%
	Other charges	2.65%
Judgment and fines	Judgment	-1.53%
	Fines	1.71%
Miscellaneous	Contributions from private sources	-5.14%
	Other miscellaneous	0.00%
Other Sources	Other resources	-4.60%

* Note: The coefficient of these revenue categories are estimated, but these specific sales-based taxes use the change of revenue collections estimated by EDR as the forecasting base.

Source: The estimated distribution to local governments of Local Discretionary Sales Surtaxes, Local Option Fuel Taxes, local government half-cent sales tax and communications services taxes are retrieved from 2020 and 2019 *Local Government Financial Information Handbook*.