State and Local Government Budgeting Tasks

Analyzing Local Revenue Composition, Trends, and Forecasting

PAD 642

Background

In this module, you learned how tax base and tax rate interactively determine tax revenues (including personal income, sales, and property taxes), and how state and local governments rely on a mix of taxes, fees/charges, intergovernmental aid, and other revenues. In this assignment, you will apply these concepts to the same local government you selected in the prior assignment by examining its revenue structure, revenue trends, and near-term revenue outlook (forecasting).

Your goal is to (1) identify your government's major revenue sources, (2) evaluate whether those revenues are sufficient and sustainable, and (3) produce a simple 3–5 year revenue forecast based on recent patterns and reasonable assumptions. Then you will communicate your findings in a two-page memo written as if you are preparing remarks for a town meeting.

Data Sources:

- (Recommended) NYS Office of the State Comptroller (OSC) Local Government Data Search

https://wwe2.osc.state.ny.us/transparency/LocalGov/LocalGovIntro.cfm

- In the "*Report*" section, select "*Revenues and Expenditures*"; in the "*Report Type*" section, select "*Trend*", then "*Submit*"
- Select your government class and name of the government, then select the six most recent years, then "*Submit*"
- On the results page, you will see major revenue categories and annual amounts. You can click "*Download to an Excel Spreadsheet*" on the upper right corner of the page to download the data for further analysis.
- Alternatively, you could also use "Local Government Interactive Data", but you won't be able to conduct your own analysis.
  - Local Government Interactive Data: https://www.osc.ny.gov/local-government/interactive-data

Tasks and Steps

Step 1: Obtain Local Government Revenue Data from OSC

Using NYS OSC resources, download multi-year revenue data for your local government. (see above)

Step 2: Revenue Composition Analysis

Based on the most recent year in your dataset, list each revenue category along with its dollar amount. Calculate each category's share of total revenues as a percentage of the overall total. A simple pie chart or bar chart would be helpful. Identify the top three to five contributors to total revenue.

Step 3: Revenue Trends Analysis

For each major revenue category (at least the top three to five), describe how it has changed over time in both dollar and percentage terms. Indicate whether the revenues are growing, declining, or remaining stable. Identify any significant changes in recent years. A line chart would be helpful for this analysis.

Step 4: Basic Revenue Projection (next 3 to 5 years)

Create a simple projection for total revenues and for the major categories (at least the top three to five). You may use different forecasting methods. A simple approach is to calculate the average percentage change over the last three to five years and assume that revenue will continue to grow at this average rate. An example is provided in the footnote.[1]

Memo to Town Meeting

Based on the above analysis, write a memo describing the revenue situation of this government to present at the town meeting. In your memo, be sure to address the following questions:

1. What are the government's major revenue sources? Which three to five categories contribute the most?
2. Over the years you analyzed, which revenues increased, decreased, remained stable, or were volatile?
3. Based on your forecast, do you expect revenues to rise, decline, or remain stable over the next three to five years?
4. Based on your observation and analysis, do you foresee potential revenue-driven budget gaps in future years? Which revenue categories could raise concern?

Use of Generative AI

You may use generative AI tools to help you with analysis methods (such as suggesting or learning forecasting methods), but you must verify all analysis results, numbers, and interpretations. Disclose the methods and assumptions you use for the analysis.

What to Submit

A two-page memo summarizing your findings and responses to the questions. You may include figures to illustrate your findings. If you use spreadsheet for your analysis, attach it as an appendix table(s).

[1] For example, if income over the last four years was \$100, \$110, \$115, and \$123, you can calculate the annual change rates as follows: 10% (from \$100 to \$110), 4.5% (from \$110 to \$115), and 7% (from \$115 to \$123). Then, take the average of these rates: $(10\% + 4.5\% + 7\%) \div 3 = 7.16\%$. Apply this average rate to project future revenue:
Next year's revenue: $\$123 \times (1 + 7.16\%) = \$131.8$
Two years later: $\$131.8 \times (1 + 7.16\%) = \$141.2$
Three years later: $\$141.2 \times (1 + 7.16\%) = \$151.3$
This method is called a constant change model. Other forecasting methods may also be used if you have learned them in other classes. Local governments use simple forecasting methods such as Moving Average Method or Linear Trend Projection.