Using State-Level Data to Study Unemployment Rates

In this assignment, students create an Excel spreadsheet with monthly unemployment rates at the state level over time.

To collect the state-level unemployment rates:

* Go to the FRED website (<http://research.stlouisfed.org/fred2/>)
* Click on the tab at the top left labeled, “Categories”
* Scroll down to “U.S. Regional Data” section and click on the link to “Sates”
* Click on the link to the selected state.
* Search for the series titled, “Unemployment Rate in State X,” where X is the selected state.
* Selected “seasonally adjusted” and click on the link to access the data.
* FRED automatically displays a graph of state unemployment rates from January, 1976, to the most recent month available.
* To obtain the unemployment rates in an Excel spreadsheet, select “Download Data” in the “Tools” menu
* Copy and paste either the graph or the numerical data into an Excel spreadsheet to complete the assignments.

Some possible assignments are described below and illustrated in an example spreadsheet using New Mexico data.

Part A: Create a tab named, “Unemployment Rates FRED graph.” Copy and paste the graph showing unemployment rates into an Excel file. Discuss the fluctuations in the state’s unemployment rates. Note that FRED includes shaded areas to indicate official recessions in the U.S. economy during this time period. Students can also discuss how closely fluctuations in the state unemployment rates match the U.S. business cycle.

Part B: Create a tab named, “Unemployment Rates Created Graph.” Copy the data from the FRED Excel file into this tab. Insert a graph of the unemployment rate time series. Format the graph as desired. In the New Mexico example, the y-axis was formatted with, “1976-01-01” set as the minimum value and, “2013-04-01” as the maximum value. The colors used in the graph are those of the state flag.

Part C: Create a tab named “NBER dates of recession.” Go to the NBER website for a list of business cycle reference dates (<http://www.nber.org/cycles.html>). Copy and paste the entire series or just the relevant dates for recessions after 1975.

Part D: Create a tab named “State and U.S. Unemployment Rates.”

* Copy the “date” and the “state unemployment rates” columns into a new tab in the Excel spreadsheet.
* To collect the corresponding U.S. unemployment rates, go to the FRED website (<http://research.stlouisfed.org/fred2/>)
* Hold the cursor over the FRED © Economic Data Tab and access the “Civilian Unemployment Rate” in the list of “Popular Series.”
* Select “Download Data” in the “Tools” menu to access the monthly U.S. unemployment rates.
* Copy the U.S. unemployment rates starting January 1, 1976 through the most recent month available and paste in a column next to the state unemployment rates.
* Insert a graph of both the state and the U.S. unemployment rates.
* Format the graph as desired.
* Assign a written discussion of the similarities between state and U.S. unemployment rates.

There are many variations of activities and cognitive levels that can be assigned using regional unemployment rates available in FRED. For example, the data could be obtained as part of a cooperative learning activity in which each group of students is assigned a geographic area within the U.S., such as the BEA regions or the BLS regions. Each student within the group could prepare an analysis of unemployment rates for a state within the region. The group could then discuss the similarities and differences in unemployment rates and business cycles across states.

Another possibility would be to look at unemployment rates at the county-level within a state and to discuss why these rates might vary.

Overall the types of activities described can be used to reinforce the concept that the national unemployment rate is an average and that much variables in economic activity is found across regions, states and counties.