**Abstract**

Okun’s Law is a widely accepted and validated negative relationship between real GDP and the unemployment rate. Researchers have continually expanded upon the magnitude of Okun’s Law in varying specifications of the relationship. I add to the literature by incorporating the Leading Economic Index (LEI) to explain changes in the unemployment rate. I build upon previous regional studies within the United States to investigate the magnitude differences for each region established by the Census Bureau. I employ statewide panel data in each region to improve the efficiency of real GDP and the LEI as opposed to using the more generic regional data. Economic variables such as the unemployment rate have many influential factors and using panel data allows the model to capture the effects of these factors that may be missed in the aggregated national data. One of the estimation issues that appears in panel data is biasedness estimators but using the Seemingly Unrelated Regression (SUR) technique corrects for the biasedness. I show that the LEI and GDP have a significant negative relationship with unemployment. I determine that for every 1 unit increase in the LEI results in a regional unemployment rate change between -0.45 and -0.97. Likewise, for every 1 percent change in real GDP produces an unemployment rate change between -0.004 and -0.008 respectively. Okun’s Law is a crucial relationship for policy makers to determine to proper set of actions to mitigate increases in the unemployment rate. Leveraging new data series such as the LEI can elevate the positive influence these policy makers have on the macro economy. These findings are consistent with previous research as well as modern literature on Okun’s Law discussing the changes in magnitude and the specification of models.