

Do not write your name on the assignment. Write your name only on the back of this sheet of paper and staple your answers on the front of this sheet of paper. The computer work of the laboratory should not have your name anywhere I can easily see it. The name should only appear on the first page of the Excel file that does not have any answer on it. It should be e-mailed to me at [wcsaplar@bethanywv.edu](mailto:wcsaplar@bethanywv.edu) when the laboratory ends. Failure to follow these directions will cost you 1 point on the assignment.

**The first part of this assignment will be done as a homework assignment and handed in at the end of the laboratory with the written part of the answers to the laboratory. The second half of this will be done during the laboratory.**

Homework questions:

- 1) (20 points) What is the equation that has nominal interest rates as a function of real interest rates and inflation? Use that equation to explain why the estimation of the real interest rate is not accurate some of the time. What is the economic reason for the inaccuracy?
- 2) (15 points) The natural rate of unemployment varies from country to country. Using two countries as examples, explain why it is different.
- 3) (20 points) Why does Okun's law only relate to too high of an unemployment rate? (Hint: How do firms change their hiring behavior when there is high unemployment versus when there is low unemployment?)

Laboratory questions:

- 4) (25 points) Using the data from your work in the lab on 9/10, run a regression to determine the trend for that data. From that regression, calculate the "Normal" output for the time periods of the data. (Note that I accidentally skipped the RSF and went to the TSF when we did lab #2. What we called RSF was actually TSF.)
- 5) (20 points) During the lab, we ran a regression that estimated the gas mileage I was getting. Do you think that the proxy we created for whether the driving was highway driving was a good proxy? Explain your logic. Is that variable significant? Explain your logic.