Place your name on the back of this sheet of paper and nowhere else. Staple your answers face up on the front of this sheet of paper. Failure to follow these directions will cost you 10 points. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Turn in the Excel file via Canvas. Place your name on an otherwise blank page of the Excel file. Failure to type this assignment will cost you 10 points. If you use doublesided printing or print on the back of scrap paper, I will give you one additional point.

All questions except for $\# 5$ should be done before class. You will hand all of the answers in together.

1) (10 points) What part of my webpage http://www.WCsaplarJr.info do you think is most helpful? Explain your logic. Is anything missing which would be helpful? If you were a Managerial Economics major, then which courses would you be taking comps in on Tuesday Morning? According to the boxes in yellow on my main page, which of the 25 most requested skills on LinkedIn are taught to our Economics majors?
2) (10 points) What is meant by "smoothness"? Why would we want a variable to have that if we are making predictions? Explain your logic.
3) (10 points) The Conference Board uses "M2" as a predicting variable while the AIER uses "M1". Which do you think is a better variable to use? Explain your logic.
4) (10 points each) For each of the following, determine if it is procyclical or countercyclical. Briefly state your logic. Also determine if it is leading, lagging, or roughly coincident. Briefly state your logic. Answer each part in a different paragraph.
A) New Private Housing Permits
B) Ratio of Consumer Debt to Personal Income
C) The OECD has a variable they call "Business Confidence Index" (BCI). https://data.oecd.org/leadind/business-confidence-index-bci.htm\#indicator-chart
5) Suppose the economy is described by $\mathrm{C}_{\mathrm{t}}=300+.9$ [Average $\left.\left(\mathrm{Y}_{\mathrm{t}}, \mathrm{Y}_{\mathrm{t}-1}, \mathrm{Y}_{\mathrm{t}-2}\right)-\mathrm{T}_{\mathrm{t}}\right], \quad \mathrm{T}_{\mathrm{t}}=.2 \mathrm{Y}_{\mathrm{t}}$, $\mathrm{I}_{\mathrm{t}}=.1 \mathrm{Y}_{\mathrm{t}}, \mathrm{G}=600, \quad \mathrm{NX}_{\mathrm{t}}=100-.02 \mathrm{Y}_{\mathrm{t}}$. Use these equations to answer this question.
A) ( 25 points) Use the system of equations to solve for Y as a function of exogenous variable(s) and parameters.
B) (15 points) Put the equations into an Excel spreadsheet. Use it to find the GDP for the next 60 years if last two years' GDP were $\$ 4000$ each. Use the Excel spreadsheet to find both the longrun government spending multiplier and the short-run government spending multiplier if government spending went up by $\$ 10$. Do this for both temporary and permanent changes of \$10.
