Wilf Csaplar Jr. Economics 350 Homework #1 **Due Friday 1/9**

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 double-sided 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. Note I am not asking a question about my webpage because both of you will get that question in the other class, and I had too many questions to ask.

1) (10 points) What is meant by "statistical adequacy"? Why would we want a variable to have that if we are making predictions? Explain your logic.

2) (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.

3) (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

4) (10 points) Go this link. It is the plot of a "variable" which is gotten by subtracting Consumer Sentiment from Consumer Confidence. The grey bars are recessions. The only difference in color of the "variable" is that green is when Consumer Confidence is greater and purple is when Consumer Sentiment is greater. Using just this graph, would you consider that "variable" to be procyclical or countercyclical? Would you consider it to be leading, lagging, or roughly coincident? Explain your logic for both parts.
https://www.advisorperspectives.com/images/content_image/data/4a/4accb498800cf7e7e610ec6967708b71.png

5) Suppose the economy is described by $C_t = 200 + .8[\text{Average}(Y_t, Y_{t-1}) - T_t]$, $T_t = .2Y_t$, $I_t = .3Y_t$, $G = 600$, $NX_t = 100 - .04Y_t$. 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 year' GDP was $8000. Use the Excel spreadsheet to find both the long-run 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.