Wilfrid W. Csaplar Jr., Ph.D.   Economics 350   Exam #3   2004/11/10

Write your name on the cover of the test booklet and on an otherwise blank page of the Excel file and nowhere else. Enclose this sheet with the booklet.   E-mail the Excel file to wcsaplar@bethanywv.edu. Failure to follow these directions will cost you 1 point. The test has 100 points (to be scaled up to 170 points) and is scheduled to take 50 minutes. Therefore, expect to spend 1 minute for every 2 points. For example, a 14-point question should take 7 minutes. Because of the class that follows your class, I cannot give you extra time.

1) (10 points each) **Briefly** answer TWO of the following questions.
A) Why do the writers of the supplementary text use a moving average of some of the variables in their predictions rather than the level of the variable?
B) The current unemployment rates for different states range from 3.1% in Hawaii to 7.9% in Washington, D.C., and 7.1% in Alaska. Use this information to explain why we might want to have a diffusion index for unemployment in the different states.
C) What do you feel is the most important quality a variable should have to be a good leading indicator? Explain why that quality is important.

2) (22 points) Run a regression from sheet #2, of sales as a function of price, income, and age. Is there a problem with multi-colinearity? If yes, then run another regression to make it more accurate. Explain how you knew it existed and why you made those changes. If no, then explain how you know you do not have it.

3) (28 points) Answer EITHER Part A OR Part B.
A) Use the data on sheet #3 to run a regression to predict sales as a function of income. Check for autocorrelation. If you find it, then run a regression of sales as a function of income and the square of income. Which regression gave the better results? How can you tell? Write the resulting equation. If you do not find it, then run a regression of the LN(sales) as a function of LN(income). Which regression gave the better results? How can you tell? Write the resulting equation.
B) Use the data on sheet #3 to run a regression to predict sales as a function of income. Check for heteroscedasticity. If you find it on the visual test, then run the formal tests. Do you have it? How can you tell? If you do not find it on the visual test, then run a regression of the sales as a function of income and time. Which regression gave the better results? How can you tell? Write the resulting equation.

4) (30 points) For EITHER the year in Part A OR the year in Part B, illustrate that year on BOTH the IS/LM diagram and the SRAS/LRAS/AD diagram. Explain how you knew where on the diagram you were. **If you were the government**, would you have increased spending or decreased spending? Why?
A) 1931
B) 1996