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Fall 2010, Intermediate Macroeconomics, section 4

ECON 2202 Data problem

General recommendations:

- Read questions thoroughly and answer each.

- When in doubt, refer to what we did in class, look at the book and the notes.

- While you may discuss this work with others, the work you hand in has to be done by only you.

- There are two pages.

- Document your work thoroughly if you wish to earn partial credit in the face of errors.

- It is due September 23, 2010, in class. Any entry after class will be given a zero, whatever the circumstance. Email submission is OK in emergency, but be aware my print-outs often do not turn up to be optimal (I do not have Microsoft Office).

- Do not delay working on this problem. There are always last minute surprises when dealing with data.

The goal of this problem is to establish whether the fact that prices are countercyclical is robust across US states. Each student works on a different state. Your assigned state is communicated to you through email. You are encouraged to work on this with a spread-sheet: it gives a cleaner output and reduces the risk of error. It is, however, possible to do this problem without a computer (except for the Internet access).

1. Find data for the total gross domestic product (GDP) for your assigned state, in real (base year 2000) and nominal (current prices) terms, for "all industry total." You can find such data on the Bureau of Economic Analysis website located at `http://www.bea.gov/regional/gsp/`. You will only find annual series, so use all years since 1990. You will find two definitions, SIC and NAICS, that span over different years but overlap in 1997. You have now four series (real and nominal GDP, SIC and NAICS definitions).

2. Compute the implicit deflator series for the GDP by taking a ratio of nominal GDP to real GDP for each of the definitions (SIC and NAICS). This is your price series. You have now two series (deflators for both SIC and NAICS).

3. Compute the growth rate series of real GDP and of the GDP deflator for each definition. Join the separate series for each definition into one series, both for deflators and GDP. You have now two series (GDP deflator growth rate and real GDP growth rate).

4. Draw <u>one</u> line diagram with the two growth rate series against time. What do you conclude in terms of comovement?

5. Draw a scatter plot (one series on each axis) for the two growth rates. What do you conclude in terms of comovement?

6. Compute the correlation between the two series. This can be done in any spreadsheet (Excel, OpenOffice, StarOffice), or with a calculator either using the formulas given in the supplementary notes to Chapter 3 or using the built-in functions of the tool you are using. How does this compare to the correlation for the whole US as seen in class?

7. (Bonus) Can you document how to obtain spurious correlation with your data? Do it.