

ECO 305: Intermediate Macroeconomics

Instructor: James Murray

Homework: Measuring Business Cycles and the Macroeconomy

Due Tuesday, January 29, by 3:55 PM

Answer the following questions using the Federal Reserve Bank of St. Louis's FRED database (<http://research.stlouisfed.org/fred2/>). Type your answers, include graphs with your answers when appropriate, convert your document to a PDF, and upload to the appropriate D2L dropbox folder. For all the graphs you create, use a date range from January 1999 through the most recent data available. Use seasonally adjusted variables whenever available.

1. For each of the expenditure components of real GDP, do the following:
 - (a) Create a graph that includes the growth rate (percentage rate of change from one year ago) of the expenditure component along with the growth rate of real GDP.
 - (b) Determine which is more volatile, the expenditure component or real GDP, and explain some reasoning why this might be so.

(Note: you should have a separate graph for each expenditure component of real GDP, and each graph should include the growth rate of real GDP for comparison)

2. Answer the following questions regarding the following components of real consumption: real consumption of durable goods, real consumption of nondurable goods, and real consumption of services.
 - (a) Define the component.
 - (b) Create a graph that includes the growth rate (percentage rate of change from one year ago) of each the consumption component along with the growth rate of total consumption.
 - (c) Determine which is more volatile, the given component or total consumption. Explain some reasoning why this might be so.

(Note: you should have a separate graph for each component of consumption, and each graph should include the growth rate of total consumption for comparison)

3. Make separate graphs of each of the following:
 - (a) Growth rate of real GDP
 - (b) Unemployment rate
 - (c) Growth rate of employee compensation (wages and salaries)
 - (d) Inflation using the GDP deflator (percentage rate of change from one year ago)
 - (e) Federal funds rate

Comment on how the variables above are related to each other. How do they each behave during the last two recessions? How did they behave afterwards?