

Problem Set 1
Economics G6222
Advanced Macroeconomic Analysis II: Economic Fluctuations
Due September 18, 2008

Business Cycle Facts

1. Create a data set with the following seven U.S. quarterly time series. The sample should begin in 1955Q1 and end in 2007Q4. Unless indicated otherwise the series can be found at www.bea.gov
 - (a) real per capita GDP
 - (b) real per capita consumption of nondurables and services
 - (c) real per capita gross private fixed investment
 - (d) per capital non-farm business hours (Source: BLS)
 - (e) real wages (hourly non farm business compensation) (Source: BLS)
 - (f) Labor productivity

Download the series in nominal terms and then transform them into real variables by deflating by the GDP deflator. Use the BLS series on the Civilian non-institutional population over 16 to arrive at per capita units. Indicate for each series the data source (for example, NIPA Table 1.1.1 line 1, or in the case of BLS series the name of the series).

2. Compute the standard deviations, first-order serial correlation and contemporaneous correlation with output of the cyclical component of each time series. Define the cyclical component as percent deviations from their respective HP trends. Use a smoothing parameter of $\lambda = 1,600$. Compare your findings to the 5 stylized facts of business cycles we discussed in class.
3. Split your sample into 1955Q1-1983Q4 and 1984Q1 to 2007Q4 and recompute the standard deviations of the seven key macro variable considered. Do you find a "great moderation"?