

**GB704 - Homework 7**  
**Due : November 30**

**Problem 1 – 25 pts**

Download dataset data1D2D.xlsx from my webpage. Use the first 500 observations as your testing sample while remaining observations are your estimation/training sample. Use that split to compare the forecasting performance for spending of the following three models:

1. Model A: A regression of  $\ln(\textit{spending})$  on  $\textit{income}$
2. Model B: A regression of  $\ln(\textit{spending})$  on  $\textit{income}$  and  $\textit{income}^2$
3. Model C: My forecast for every observation is the estimation sample average of  $\textit{spending}$

**Problem 2 – 25 pts**

Download the realGDP dataset from my webpage. Keep only post-1985 data (for reasons we will discuss in class). Compute quarterly growth rates. Using the 1985-2010 as the training sample and any data after that as the testing sample, compare the forecasting performance of an AR(1) for real GDP growth to a model that simply assumes that post-2010 growth will be the average growth rate between 2008 and 2010.