

Spring 2008
Econ 175a
Homework 2 (Due on Feb. 12)

For this assignment, you are required to form a group with a size of three to five. For those of you who are not familiar with Excel, this is your best opportunity to learn from your peers. Each group only needs to hand in one copy of your work.

There are two purposes for this assignment:

- To show you the magic power of compounding;
- To get you familiar with one major development database, so you can possibly utilize it to facilitate your term paper research.

1. Starbucks, merit of saving and power of compounding

Say you suddenly changed your habit of coffee drinking. Instead of one cup of Starbucks coffee every weekday, you now drink only twice a week. Each Starbucks coffee costs you \$3 on average. So you save \$9/week, \$36/month, \$430/year. To simplify calculations and considering that not everyone is coffee addicted, let's say you just save \$300 a year. Now you decide to invest your savings in stocks, and assume you get a 7% return per year on average. To avoid complications, remember you only invest ONCE at the end of every year.

- a) You can invest for 40 years (that's roughly equal to your career life from 22 to 65 at retirement). Guess and write down the total amount you would get from your investment at the beginning of your retirement.
- b) Download this excel file at http://econlearning.com/HW2_data.xls. Open the file and fill the blanks under 'Total_stock_investment'. To do so, you may want to mimic the formula I used for column "Total_bank_savings". After calculation, graph data in both columns in the same chart (use line graph).
- c) Compare your guess in a) and calculation in b), and comment on your findings in the context of economic growth.

2. Access *World Development Indicators (WDI)* database using this link:

<http://its.brandeis.edu/research/articles/wdi.html>. Scroll down to the bottom and click on "Enter the database". Log in using your UNET ID, and choose "OLD WDI Online". Now pick any one developing country you are interested in and click "Next". On next page, you need to choose two data series. First, type in "GDP" and click on "Find". In the narrowed-down list, choose "GDP growth (annual %)", and click 'Select'. Now pick the second series called "Aid (% of gross capital formation)" by following similar procedure. On the next page, highlight all years and move them into the right box. The data will show up in the last page. You need to save them by choosing "Save data as excel file" under "Data export options".

Use Excel to open the file you just downloaded from WDI Online, and graph the two series in a scatter plot (put GDP growth on Y axis and Aid on X axis). Present your graph and comment on your findings.