

## Problem Set #2: Why did China grow?

**DUE:** In class, March 11th or March 12th depending on section

**You may work in a group of up to 3 people. Whatever you hand in should be the work of your group. Your report should take the form of a professional piece of work.**

1. Why did China grow? Simple question and guess what...we know how to answer it.

On the course website is an excel file with data from China for over the past 60 years. In it is data on real GDP, employment, the stock of capital. In performing your calculations assume that payments to labor make up two-thirds of GDP in both countries, i.e.,  $1 - \alpha = 2/3$ .

- a. Create well-labeled graph that plots the **natural logarithm** of GDP per worker over time.
- b. Using the capital, labor, GDP data and the production function, compute TFP for each year. No need to do anything here, just need to get ready for the next step.
- c. Create well-labeled graph that plots the **natural logarithm** of TFP over time.
- d. Separate each country's growth experience into two periods: 1952–1990 and 1990–2014. And for each period report:
  - The average growth rate of output per worker ( $Y/L$ ),
  - $\alpha$  multiplied by average growth rate of capital per worker ( $K/L$ )
  - the average growth rate of Total Factor Productivity

China	$Y/L$	$\alpha K/L$	TFP
1952–1990			
1990–2014			

- e. Be prepared to discuss the following issues in class:
  - What is the most important factor behind China's growth?
  - What does this suggest about how wages are changing in China?
  - What does this suggest about how interest rates in China have changed?
  - How should one think about TFP in the context of China's experience. Hint: Checkout the discussion in Chapter 9 of Mankiw (particular management practices, good institution, and trade).