EC1010: Tutorial Questions 3

February 5, 2010

1. Suppose there are two economies, A and B. A is forty times richer than B. According to empirical research, is most of this income disparity due to differences in TFP or differences in K between these countries?

2. Suppose there are three economies, A, B, and C. The capital stock of Economy A is above its steady state capital stock; the capital stock of Economy B is at its steady state; and the capital stock of economy C is below its steady state level. Growth in TFP is zero in all cases. In which country is the capital stock K growing fastest? In which country is real potential GDP, Y, growing fastest? Explain.

3. Suppose there are two economies, A and B, both of which have the *same* steady state. If A is poorer than B, which country would be experiencing faster growth in a) capital stock b) real potential GDP and c) real potential GDP per capita (i.e., the standard of living)? If we are not told anything about the steady states of A and B, how would your answers change?

4. Research shows that when an economy opens up to trade and becomes more globalized, there are two effects: first, domestic industries face greater competition, forcing them to become more efficient, and second, new innovations can be imported from abroad. Using a diagram, explain how you would represent these changes in the Solow model. In particular, what effect would there be on the standard of living?

5. Suppose that an economy is at steady state with some savings rate s. For some reason, the savings rate then falls to zero. Using a Solow diagram, explain what would happen in the economy. What is the steady state a) capital stock b) real potential GDP? What is the standard of living, $\frac{Y}{L}$, in the new steady state?

6. These questions relate to Figure 1. Use the theory presented in lecture to answer the following:

   (a) Why is China growing so fast in 2000?

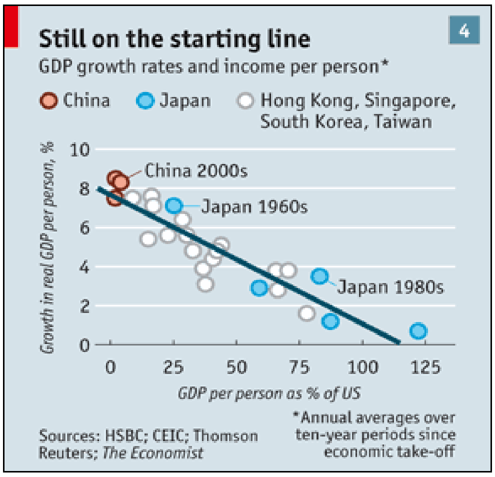

Figure 1: Growth rates of real GDP per person in Asian economies.

(b) According to Figure 1, as China becomes richer relative to the U.S., what will happen to growth rates in real GDP per person? Why?

(c) Japan grew fast in the 1960's, but slowed down in the 1980s. Why?

(d) GDP per person in Zambia is only a small percentage of GDP per person in the U.S. Does Zambia lie on the line in Figure 1? Explain.