IAS 107: Spring 2011: Problem Set 1

Due at the start of lecture on Th Jan 27

1. What are the four parts of macroeconomics?

A: Depression Economics, Inflation Economics, Government Debt-and-Deficit Economics, and Growth Economics (from lecture).

2. Why are real GDP per capita and the unemployment variables important quantities to look at?

A: Real GDP per capita is a rough index of overall prosperity, and the unemployment rate tells us whether the economy is producing at or below its sustainable current productive potential--and if below, how fr below (from lecture and textbook).

3. Roughly, what was the highest that the inflation rate reached in the twentieth century?

A: A little over 20% during World War I and just after World War II when wartime price controls were removed (lecture and textbook back inside cover).

4. Roughly, what was the highest that the unemployment rate has reached in the last fifty years?

A: 23% economy-wide, 28% nonfarm unemployment during the Great Depression (lecture and textbook back inside cover).

5. What are the major components of GDP on the expenditure side?

A: Consumption spending by households, investment spending by businesses to expand capacity or repair or replace worn-out capital (including investment in inventories), government purchases of goods and services, and the balancing item of net exports to get us back from a measure of spending to a measure of production (lecture and textbook).

6. Jean Baptiste Say in 1803 claimed that because nobody makes anything without intending to use it or sell it, and nobody sells anything without intending to buy something else, that there could be no general shortage of demand in an economy--that there could be a planned excess of supply of some commodities, but it would be balanced by a planned excess of demand of some other commodities. Was he wrong? Why was he wrong?

A: People can plan to spend their income not just on currently-produced goods and services but also on financial assets--and people can seek to spend more than their income if they intend to sell off their financial assets. Thus you can have deficient demand for pretty much all currently-produced goods and services if there is excess demand for financial assets. (Historically, we have seen three types of excess demand for financial assets: excess demand for money (like cash), excess demand for savings vehicles (like bonds), and excess demand for safe assets (like now) (lecture).

7. About how many people lose or quit their jobs in an average month?

A: About 5 million people a month (Federal Reserve Economic Data Job Openings and Labor Turnover: [http://research.stlouisfed.org/fred2/series/JTSTSL?cid=32246).](http://research.stlouisfed.org/fred2/series/JTSTSL?cid=32246)

8. About how many people get jobs in an average month?

A: About 5 million people a month (Federal Reserve Economic Data Job Openings and Labor Turnover: [http://research.stlouisfed.org/fred2/series/JTSHIL?cid=32245).](http://research.stlouisfed.org/fred2/series/JTSHIL?cid=32245)

9. About how many people are unemployed in an average month?

A: Until recently, about 8 million. Now? 15 million (Federal Reserve Economic Data: Employment and Population: Household Survey: [http://research.stlouisfed.org/fred2/series/UNEMPLOY?cid=12).](http://research.stlouisfed.org/fred2/series/UNEMPLOY?cid=12)

10. About how many people are at work in an average month?

A: About 140 million (Federal Reserve Economic Data: Employment and Population: Household Survey: [http://research.stlouisfed.org/fred2/series/CE16OV?cid=12).](http://research.stlouisfed.org/fred2/series/CE16OV?cid=12)

11. About how many people are unemployed now?

A: 15 million (Federal Reserve Economic Data: Employment and Population: Household Survey: [http://research.stlouisfed.org/fred2/series/UNEMPLOY?cid=12).](http://research.stlouisfed.org/fred2/series/UNEMPLOY?cid=12)

12. If a quantity grows at about 3% per year, how long will it take to double?

A: 24 years (lecture).

13. If a quantity shrinks at about 4% per year, how long will it take it to halve itself?

A: 18 years (lecture).

14. If a quantity doubles five times, how large is it relative to its original value?

A: 32 times as large (lecture).

15. If a quantity halves itself three times, how large is it relative to its original value?

A: 1/8 as large (lecture).

16. Roughly, how much larger was global real GDP in 1800 than it was in the year 1?

A: Population 2.5 times as great; income per capita perhaps 1.25 as great, for a total of perhaps 3 times as large--but we really do not know (textbook inside back cover)

17. Roughly, how large is global real GDP today?

A: 7 billion people at perhaps $7000 per capits = $50 trillion per year (lecture; textbook inside back cover).

18. Roughly, how much larger is global real GDP today than it was in 2000?

A: Population is growing at 1% per year and (this recession aside) world incomes are growing at 3% per year. A 4% total growth rate for ten years is (1 + 4%)^11 = 1.04^11 = 1.54 which means the world economy today is 54% larger than it was in 2000 (lecture).

19. Roughly, what is the gap between real per capita GDP in the U.S. today and real per capita GDP in China?

A: China: $7,200 U.S.: $41,000. U.S. is still more than 5.5 times as rich (http://www.gapminder.org/world/).

20. Roughly, what is the gap between real per capita GDP in China today and real per capita GDP in Mozambique?

A: China: $7,200 Mozambique: $890. China is more than 8 times as rich (http://www.gapminder.org/world/).