

Econ 115: Sample Final Exam

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PART I: PROBLEMS (25%)

1. The earth's population was 5 million in 10,000 BC, 160 million in 1 AD, and 640 million in 1700. Let's further assume that the growth rate of output-per-capita (y) and the growth rate of resources (r) were zero from 8,000 BC to 1700. Recall our rule of thumb for pre-industrial growth in the economy as a whole:

$$y + l = 0.5(l + e) + 0.2(k) + 0.3(r)$$

where l is the rate of growth of population and k is the rate of growth of the capital stock.

- How fast did e , the *efficiency of labor*, grow from 10,000 BC – 1 AD?
- How fast did e grow from 1 AD - 1700?
- Suppose that the population in 1 AD were actually not 160 but 320 million. Redo your calculations of the annual growth rate of e from 10000BC-1, and from 1-1700. What difference does it make?

2. Suppose we have a world more-or-less as it stood in 1900, with 60 million workers in the North Atlantic “core,” and 240 million workers in the periphery. Workers in the core can produce 10,000 pounds of food or 10,000 pounds of modern manufactured goods per year. Workers in the periphery can produce 4000 pounds of food or 1000 pounds of manufactured goods or 2000 pounds of “tropical” goods—coffee, tea, etc.—per year. Food in the core costs 20 cents/pound. Food in the

periphery costs 1 rupee/pound.

a. Suppose that there were no trade between core and periphery: (i) What is the equilibrium price of manufactured goods in the “core” in dollars per pound? (ii) What is the equilibrium price of tropical goods in the “periphery” in rupees per pound? (iii) What is the price of manufactured goods in the “periphery”? (iv) What is the income of the average core worker? (v) What is the income of the average periphery worker?

b. Now consider “industrial trade”—tropical goods can be costlessly shipped to the core, manufactured goods can be costlessly shipped to the periphery, but staple foods cannot be shipped from core or periphery on a large enough scale to matter; and your average core worker spends 5% of his or her income on tropical goods: (i) What will be the dollar price in the core of tropical goods? (ii) What will be the equilibrium dollar:rupee exchange rate? (iii) How much does the average core worker spend on tropical goods? (iv) How many pounds of tropical goods does the average core worker buy? (v) How many pounds of manufactured goods does the average core worker have to export in order to pay for the imports of tropical goods?

3. Keynesian Cross: Define the following variables: Y = Output (GDP)
 AD = Aggregate Demand C = Consumption I = Investment G = Government Spending T = Net taxes = taxes – transfers

a) Let $C = a + b(Y-T)$, $0 < b < 1$. Interpret b . Why is it reasonable to assume that b lies between 0 and 1?

b) Let $AD = C + I_0 + G_0$, where I_0 and G_0 are fixed. Substitute the expression from part (a) for C . Then graph aggregate demand with aggregate demand on the vertical axis and Y on the horizontal axis. What can you say about the slope of the aggregate demand curve?

c) In equilibrium, output must equal aggregate demand ($Y=AD$). Add this line to your graph.

- d) Suppose a financial crisis lowers how much firms want to invest and consumers want to spend. In this model, what happens? Show the result in your graph.
- e) In this model, what can the government do (if anything) to bring output back to its pre- crisis level?
- f) Was fiscal policy used during the Great Depression? Explain.
- g) Is the Obama administration currently using fiscal policy?
- h) What does the Great Depression and / or the current crisis suggest (if anything) about the validity of this model?

PART II: SHORT ANSWERS (25%)

1. What is Naziism? What is Stalinism? What is Maoism? Why are they important for the history of the twentieth century?
2. What is the Marshall Plan? Why is it important for the history of the twentieth century?
3. What is the Kyoto Climate Protocol? Why is it important for the history of the twenty-first century?
4. What is the world oil crisis of the 1970s? Why is it important for the history of the twentieth century?

PART III: ESSAYS (50%)

1. Amuse Josh Hausman and the other GSIs by writing a witty, coherent, and informative essay about global income divergences. Why after 100

years of globalization have only a handful of countries converged to industrial-leader levels of technological and organizational competence/

2. Eric Hobsbawm is surely the best writer and the most lively of the readings for this course. A great deal of this is the result of his own internal tensions: the elder statesman of economic history today is still the young teenager who joined the Third International's German and British Communist parties in the 1930s. Hobsbawm still believes that he was in some sense right to join the World Communist Movement in the 1930s—to join the fascists was to join a cause that was irremediably evil, and to stick with the old capitalist order was to join a cause that was irremediably corrupt, and that only the Communists promised a way forward. (And also right to leave the Party and its discipline and become an independent critical socialist intellectual in the 1950s.) Do you think he is right? Why or why not?