Econ 342 - Global Economic History
College of William and Mary
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October 6, 2016

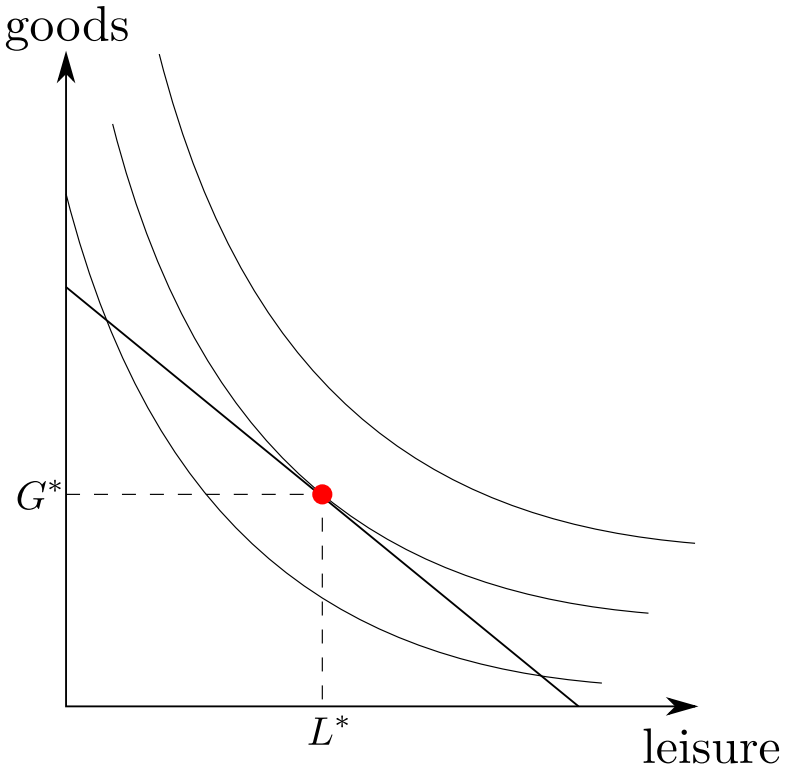
Midterm Exam

You have until 3:20pm to complete the exam, be certain to use your time wisely. Answer all questions directly on the exam. You may use any printouts and notes that you brought with you. No electronic devices may be used during the exam. Answer questions completely but concisely. Including additional incorrect information in an otherwise correct answer may result in a loss of points. Remember to put your name on the exam. Good luck!

Name:

1. (20 points) Consider three measures of the standard of living discussed in the readings by Clark and Steckel: human stature, share of animal products and fats in overall diets, and life expectancy. For each of these, explain why it may provide a better measure of historical differences in the standard of living across societies than average wages. For each measure, also explain why it may provide a worse measure of historical differences in the standard of living across societies than average wages.

2. (30 points) During the Industrious Revolution, decisions over time allocation changed for a variety of reasons. Here we will consider a simplified model of time allocation. Let's assume that time can be used either for leisure or for work. Individuals get utility from leisure and from the goods they purchase with their wages. The graph below depicts a person's optimization problem. The graph shows a budget line and three different indifference curves. She can choose any combination of goods and leisure on or below the budget line. She will maximize her utility by finding the combination that gets her to the highest possible indifference curve. This optimal bundle is labeled as (L^*, G^*) on the graph.



(a) Explain how and why the budget line on the above graph changed for adult female workers during the Industrious Revolution.

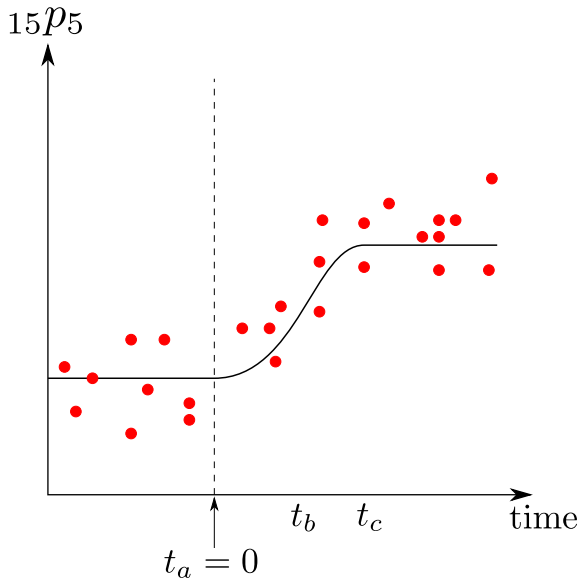
(b) Explain how and why the indifference curves changed for adult female workers during the Industrious Revolution.

(c) On the graph above, draw a new budget line consistent with your answer to part (a). Also show a new optimal bundle of leisure and goods and an indifference curve passing through that bundle consistent with your answer to part (b).

(d) Would your answers to parts (a), (b) and (c) have changed if we were focused on adult male workers as opposed to adult female workers? Be certain to justify your answer.

Page left blank to provide space to answer Question 2.

3. (30 points) The graph below gives a stylized version of the data presented in Bouquet-Appel (2011). The horizontal axis is time, with zero corresponding to the advent of farming. The vertical axis measures the proportion of 5- to 19-year-old skeletons relative to all skeletons 5 years and older, ${}_{15}p_5$. Each point represents an observation for a particular society. The black curve is simply the best fit curve through the points.



Using graphs of the birth rate, death rate and technology curves in our Malthusian model and written explanations, explain the following three features of the graph:

(a) The rise in the proportion of 5- to 19-year-old skeletons starting at $t_a = 0$.

(b) The decrease of the slope of the curve starting at t_b.

(c) The difference between the proportion of 5- to 19-year-old skeletons for time periods before t_a and time periods after t_c.

4. (20 points) We discussed how the growth rate of technology, g_A, that we obtain from our growth accounting framework is really a 'measure of our own ignorance'.

   (a) Explain why we consider the growth rate of technology a measure of our own ignorance.

   (b) Will a failure to account for increasing human capital per worker in our growth accounting equation lead to over- or underestimates of the growth rate of technology in the preindustrial world? Fully explain your answer.

   (c) What data could you use to incorporate the growth rate of human capital into our growth accounting equations if we wanted to measure modern economic growth? What data could you use if we wanted to measure preindustrial economic growth? Be certain to explain the advantages and disadvantages of the data in each case.