Final Exam

While you have three hours to complete the exam, it is written to take only one and a half hours. Keep that in mind when thinking about the expected length of your answers. Answer questions completely but concisely. Including additional incorrect information in an otherwise correct answer may result in a loss of points. As a rough rule of thumb, five points typically take two well-crafted sentences to answer correctly and completely. So a 10-point question typically requires four concise sentences to answer.

You may refer to your notes, the lectures slides, readings and any other materials posted on our course Blackboard site. You may access either printed or electronic versions of these materials. You may not use the internet to search for additional information during the exam and you may not seek the help of any other individuals.
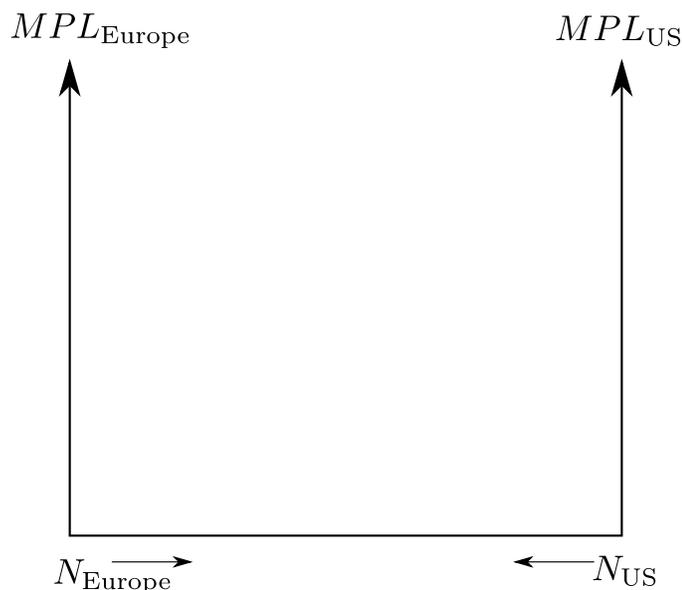
Good luck!

Name:

ID Number:

1. (20 points) We have discussed a wide variety of papers using different types of evidence, employing different empirical methodologies and asking a diverse range of questions.

    (a) Which paper did you find most compelling in terms of the empirical methodology? Explain why in no more than three sentences. You are welcome to discuss a required or non-required paper from any point in the semester.

    (b) Which paper did you find most compelling in terms of the fundamental question being asked? Explain why in no more than three sentences. You are welcome to discuss a required or non-required paper from any point in the semester.

    (c) Which paper had the least compelling evidence? Explain why in no more than three sentences. Restrict your attention to only the required readings but you may choose a required reading from any point in the semester.

2. (10 points) The graph below shows the marginal product of labor in Europe, measured on the left vertical axis, and the marginal product of labor in the US, measured on the right vertical axis, as functions of the distribution of workers between Europe and the US. The width of the horizontal axis is the total combined number of workers between Europe and the US. The number of workers in Europe is measured starting from the left while the number of workers in the US is measured starting from the right.

MPL_{Europe} MPL_{US}

$N_{\text{Europe}} \longrightarrow$ $\longleftarrow N_{\text{US}}$

(a) Assume that labor markets are competitive and workers are paid wages equal to their marginal product of labor. Label the distribution of workers between Europe and the United States at the end of the Age of Mass Migration, just before the Quota Act and National Origins Act limited immigration, on the graph as N^*_{US} and N^*_{Europe}. Give an explanation of why you chose that distribution. Your explanation should rely in part on evidence from lecture or our readings and should be no more than three sentences.

(b) We used this style of graph in class to discuss the economic rationale behind the Homestead Act. In short, incentivizing workers to move from the East to the West raised overall output in the United States. Given the graph above and your answer to part (a), should the same logic have applied to migration into the United States from other countries? In other words, should the United States have provided incentives for Europeans to come to America rather than introducing legislation restricting immigration? Your answer should be focused on the impact of migration on overall output in the US and should touch on both where the logic behind the Homestead Act does apply to international migration and where the logic would differ between the two situations. Your answer should be no more than four sentences.

3. (20 points) The articles by Galenson (1981) on indentured servitude and by Abramitzky, Boustan and Eriksson (2014) on the Age of Mass Migration were both published in the *Journal of Political Economy*, one of the top general interest journals in economics. Given that both articles were considered cutting edge at the time of publication, what do the differences between the articles tell us about the evolution of economic history research over the past few decades? Your answer should address the questions being asked and the data and methods being used. You must make reference to both articles in your answer but you can also bring in any other relevant articles or discussions from class. Limit your answer to no more than ten sentences.

4. (25 points) Both the Abrimitzky, Boustan and Eriksson (2014) and Collins and Wanamaker (2014) articles utilize linked census samples to explore the returns to migration. In the case of Abramitzky, Boustan and Eriksson, the focus is international migration during the Age of Mass Migration. Collins and Wanamaker are focused on internal migration during the Great Migration. In this question, we will think about some of the econometric issues these linked census data fix and the issues they introduce.

   (a) Abramitzky, Boustan and Eriksson highlight the issue of declining cohort quality as a reason that prior studies using only cross-sectional data overestimated the earnings convergence of migrants. Do you think that cohort quality among black migrants from the South to the North would be increasing or decreasing over the period of Collins and Wanamaker's study? Explain your reasoning in no more than three sentences.

   (b) Recall that Collins and Wanamaker are focused on the first wave of the Great Migration. Given your answer to part (a), would you expect Collins and Wanamaker to find larger or smaller returns to migration if they could look at the second wave of the Great Migration? Fully explain your answer in no more than four sentences.

   (c) The second critique of prior studies Abramitzky, Boustan and Eriksson had was that even repeated cross-sectional data couldn't account for return migration. In the case of black migrants from the South to the North, would you expect negative selection into return migration? Would this return migration lead Collins and Wanamaker to overestimate or underestimate the returns to migration? Be certain to fully explain your answers to both questions. Your answer should be no more than five sentences.

5. (25 points) In class we discussed the possibility that transportation networks were inefficiently small due to the positive externalities associated with transportation. Even if markets were competitive, transportation providers would only build systems up to the point where their marginal costs equalled the private marginal benefit of the last user of the transportation network. At that point, the social marginal benefits still exceed the marginal costs of additional construction.

   (a) Use a graph to show the deadweight loss to society that would result from building out railroad networks to the point where the marginal cost is just equal to the private marginal benefit. Your graph should have mileage of the transportation network on the horizontal axis, prices on the vertical axis, and should have the size of the railroad network in competitive equilibrium (where private marginal benefit equals marginal cost) labeled as M^*. Label the deadweight loss at this equilibrium as DWL. For each curve shown on your graph, clearly label the curve and provide a one- to two-sentence explanation of why the curve is upward sloping, downward sloping, or flat.

   (b) Suppose that the graph you drew for part (a) corresponds to railroads in the second half of the nineteenth century. How would the graph differ if it were for canals in the second half of the nineteenth century? Explain which curves would differ and why.

   (c) Now suppose that we considered a graph for canals at the very beginning of the nineteenth century. How would your answer to part (b) change? Be certain to fully explain your answer.

   (d) We discussed land grants as a potential way to encourage more railroad construction. However, we discussed them in the context of a monopoly, not a competitive market as in this question. Would giving land grants to railroad companies help reduce the deadweight loss you identified in part (a) if there were many competing railroads? Be certain to fully explain your answer in no more than four sentences.