Homework 8

ECON 380
UNC Chapel Hill

Name: _____

ONYEN: _____

> This homework is due on **December 7** by **2:15PM**. You must turn in your work
> on a printed copy of this document in order for it to be graded. Your assignment
> must be stapled and in the correct order. Non-stapled assignments will
> automatically receive a 10 point deduction. There are a total of 50 available points.

1. Suppose we are analyzing the economic performance of migrants over time by looking at census data from 2010. There are three migrant cohorts in the population described as follows:

    i. 1990 cohort: Low-skilled group with average skill level $\bar{S}_{90} = 2,000$

    ii. 2000 cohort: Medium-skilled group with average skill level $\bar{S}_{00} = 6,000$

    iii. 2010 cohort: Highly-skilled group with average skill level $\bar{S}_{10} = 12,000$

    For simplicity, assume that all migrants in each cohort arrived at age 20. Additionally, suppose that the average native skill level is $\bar{S}_N = 6,000$.

    Average wages increase with age (i.e., experience) for each group g as follows:

    $$\bar{w}_g = \$1 \times \bar{S}_g + \$1,000 \times Age$$

    (a) What is the average wage each migrant cohort received when they first migrate to the U.S? **[3 pts]**

(b) What is the average wage of each migrant cohort when we observe them in the 2010 census? **[3 pts]**

In Figure 1 below, draw and clearly label each of the following:

(c) The age-earnings profile of each migrant cohort as well as the age-earnings profile of native **[4 pts]** workers.

(d) The predicted age-earnings profile for migrants if we naively assume that migrant cohorts **[2 pts]** are equivalent and use only the age-earnings data we observe.
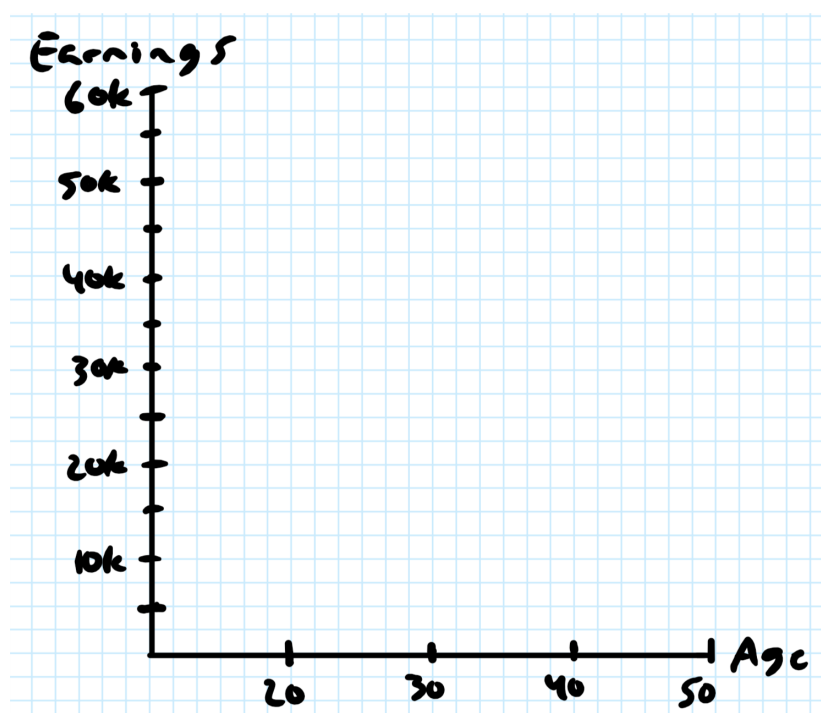

Figure 1: Age-Earnings Profile

(e) Does our estimated migrant age-earnings profile show an earnings deficiency for recent **[2 pts]** migrants compared to native workers?

(f) Does our estimated migrant age-earnings profile show a positive or negative effect of length **[2 pts]** of stay on wages?

(g) Is our estimated effect of length of stay on migrant earnings biased? If so, in which direction **[4 pts]** and why?

2. (Borjas 8.4) Labor demand for low-skilled workers in the United States is $w = 24 - 0.1E$ where E is the number of workers (in millions) and w is the hourly wage. There are 120 million domestic U.S. low-skilled workers who supply labor inelastically. If the U.S. opened its borders to immigration, 20 million low-skill immigrants would enter the U.S. and supply labor inelastically.

(a) What is the market-clearing wage if immigration is not allowed? **[2 pts]**

(b) Draw a graph showing the effect of an open borders policy. **[4 pts]**

(c) What is the market-clearing wage with open borders? **[2 pts]**

(d) How much is the immigration surplus when the U.S. opens its borders? **[4 pts]**

(e) How much income is transferred from domestic workers to domestic firms? **[2 pts]**

Directions: Type your answers to the following questions and attach them to the back of this packet.

3. Read the abstract, introduction, and conclusion in Tunali (2000).

   (a) Briefly (3-4 sentences) describe his findings in regards to (i) the "rationality hypothesis" **[3 pts]** and (ii) the returns to migrants in his analysis.

   (b) What are the possible reasons stated in the conclusion as to why returns to migration **[1 pt]** might vary across individuals?

4. Read "The Immigrant Equation" by Roger Lowenstein from The New York Times.

   (a) Briefly summarize (1-2 sentences) Borjas' beliefs regarding the effect of immigration on **[3 pts]** poor Americans.

   (b) Briefly summarize (1-2 sentences) Card's beliefs regarding the effect of immigration on **[3 pts]** poor Americans.

   (c) Compare the skill sets between: (i) US natives and immigrants during the immigrant wave **[3 pts]** between (roughly) 1880 - 1920 and (ii) US natives and immigrants during the most recent immigrant wave.

   (d) Explain Giovanni Peri's theory regarding the effect of immigration on native, low-skill **[3 pts]** workers.