Practice Problem Set 2

Read each question in its entirety before beginning, then answer the question as clearly and concisely as possible. Make sure to answer all of the questions. You may find it helpful to outline the important points first, and then fill in the details.

1. The United States, unlike Canada, receives a large number of illegal immigrants each year. It is illegal for employers in the United States to knowingly hire illegal aliens. However, this has not reduced the flow of illegal aliens into the country. As a result, it has been proposed that the penalties against employers who break the law be increased substantially. Suppose that illegal aliens, who tend to be less-skilled workers, are compliments with native workers. What will happen to the wage of native workers if the penalties for hiring illegal aliens increase and effectively reduce the number of illegal aliens hired?

2. Suppose that a worker's skills can be summarized by the number of efficiency units she owns and that the distribution of efficiency units in the population is such that worker 1 has one efficiency unit, worker 2 has two efficiency units, and so on. There are 100 workers in the population of Neolandia.

In deciding whether to migrate to Canada, Neolandians compare their weekly earnings at home (w_0) with their potential earnings in Canada (w_1). The wage-skills relationship in each of the countries is given by:

$$w_0 = 700 + 0.5s$$
$$w_1 = 670 + s$$

where s gives the number of efficiency units that the worker has.

a) Assume that there are no migration costs. What is the emigration rate from Neolandia (that is, the fraction of Neolandian population that moves to Canada)? What is the average number of efficiency units among immigrants? Is the immigrant flow positively or negatively selected?

b) Suppose that it costs $10 to migrate from Neolandia to Canada. What is the emigration rate from Neolandia? What is the average number of efficiency units among immigrants? Is the immigrant flow positively or negatively selected?

c) What would happen to the type of selection that takes place if migration costs are not constant in the population, but are much higher for more skilled workers?

3. Assume that the labour market can be described by the following supply and demand equations:

S: $e = a + bP + cW$

D: $e = \alpha + \beta P + \eta W$

Where e is the log of employment, W is the log wage, and P is log of the "population". (Note that η is likely negative.)

a) Interpret b and β. Explain how immigration may shift the population. Define γ as the elasticity of population, P, with respect to immigration, I. Why might γ vary across markets?

b) Solve for the equilibrium wage and employment level as a function of the population.

c) Assume the following parameters: $c = 0.1$ and $\eta = -0.3$, which are in accordance with the empirical literature. Using your answer in part (b), evaluate the impact of an increase in immigration on equilibrium employment and wages under two scenarios:

i. $\beta = 0$; b=1
ii. $\beta = 1$; b=1

Assume that the elasticity of population with respect to immigration is 1. Interpret your results, using a figure like Figure 11.4 in your textbook.

4. State whether you agree or disagree with each of the following statements. If you agree with the statement, explain why you agree, and if you disagree, explain why you disagree (include the correct statement in your answer). I encourage you to illustrate your answers using diagrams where appropriate.

a) Competition ensures an equal present value of net advantage at the margin across occupations. However, this does not imply that wages will be the same across occupations.

b) An increase in the immigration of low-skilled workers has an unambiguously adverse impact on the wages of low-skilled native-born workers.

c) The "entry effect" and "assimilation" profiles of recent male immigrants to Canada raise concerns about their ability to integrate into the Canadian labour market.