Practice Problem Set 1

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. Anthony has just finished high school. He has three periods of time left in his working life, and is considering three career options:

i. Obtain a job in a hotel, earning \$20,000 for each of the remaining three periods of his working life.

ii. Attend community college, earning a diploma in human resources. The diploma takes one period to complete, with tuition fees equal to \$5000. After graduation, he will earn \$50,000 for the remaining two periods of his life.

iii. Attend university to obtain his Ph.D. in art history. The degree takes two periods to complete, with tuition fees of \$10,000 per period. After graduation, he will earn \$90,000 for the one remaining period of his working life.

Assume that the interest rate is 10 percent per period.

a) Which career path should Anthony follow? Explain.

b) Anthony has always wanted to be an art historian. If he chooses to be an art historian, what is the implicit consumption value he places on being an art historian?

2. A researcher has access to the 2000 Labour Force Survey, and estimates the following regression:

 $lnW_{\rm i} = 10.46 \pm 0.336 PUBLIC_{\rm i}$

where W_i is individual annual earnings, and PUBLIC_i is an indicator of whether the individual works in the public sector.

a) Calculate the implied ratio of public to private sector earnings.

b) The researcher concludes that this is evidence that public sector workers earn economic rents, that is, that they are overpaid. Critically evaluate the researcher's conclusions, and explain how the researcher could refine his estimate.

3. Grant, a young Newfoundlander, has just graduated from high school and is deciding what to do with the rest of his life, which lasts two periods (like everyone else's). His main decision is whether to stay in Newfoundland or migrate to Toronto.

If he stays in Newfoundland, he will earn Y_0 in period one and Y_1 in period 2. If he moves to Toronto, he will incur a moving cost of M (in the first period), and will be unemployed (with zero earnings) for the first period. In his second period in Toronto, he will earn Y_T . The interest rate at which money can be borrowed or invested is r.

a) On a carefully labelled diagram, illustrate Grant's migration decision, that is, show his earnings paths as a function of time, depending on whether he lives in Newfoundland or Toronto.

b) Show that he will move to Toronto if:

 $(Y_T - Y_1) > (1+r)(Y_0 + M)$

What is the economic intuition underlying this result? How does an increase in the interest rate affect the migration decision? Why?

c) As a potential labour economist, Grant realizes that he needs to have estimates of Y_T and Y_1 in order to make a wise migration decision. He reads in the newspaper that average earnings of Newfoundlanders in Toronto are Y_T *, while Newfoundlanders earn an average of Y_1 *, if they stay in Newfoundland. (Both refer to second period earnings) With reference to the result in b), discuss the potential error that Grant may make by using Y_T * and Y_1 * as the basis of his estimate of the return to migration.

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) The minimum wage prevents workers from investing in on-the-job training and discourages employers from providing firm-specific training to low-income workers.

b) Government social transfer programs that decrease geographic mobility among workers should be removed.

c) Non-competitive factors likely explain the public-private wage differential.