Discussion Questions/Exercises

1. Consider a self-contained city, that is, a city in which all workers live in the city. The initial
    equilibrium wage is W_0 and the initial equilibrium employment is N_0.
a. Use the conventional supply-demand graph to show the effects of an increase in export
    demand on the city's labor market. Label the new wage W_1 and new employment level N_1.
b. Now suppose that the city institutes a growth-control program that holds the total housing
    stock (total square footage) at its initial level (before the increase in export demand). Use the
    same supply-demand graph to show the effects of the increase in export demand under the
    growth control program. Label the new wage W_2 and the new employment level N_2.
c. Explain the differences between the market equilibrium and the growth-control equilibrium.

2. Consider a city that uses a business tax to finance the provision of industrial services (e.g.,
    roads, water, sewers). If the city does not provide these services, the individual firms must
    supply their own. Suppose that the city decides to cut business taxes and expenditures on
    industrial services by the same amount. Evaluate the effects of the new tax-expenditure policy
    on the city's labor market. Will total employment in the city increase or decrease?

3. Consider two cities, Flexville and Rigid City that have the same equilibrium wage and the
    same equilibrium total employment. The export industries in the two cities produce the same
    good. In Flexville, export firms produce with variable factor proportions: the amount of labor
    per unit of output depends on the relative price of labor. In Rigid City, export firms produce
    with fixed factor proportions: the amount of labor per unit of output is fixed. Suppose that
    both cities find a way to increase the quality of residential public services (e.g., public
    schools, parks, libraries) without increasing taxes. Use two graphs, one for each city, to show
    the effects of the improvements in public services on equilibrium employment and the
    equilibrium wage.

4. Suppose that a city is debating between using a pollution tax to reduce citywide industrial
    pollution by a total of 25 percent, and requiring that each polluting firm decrease its pollution
    by 25 percent.
a. Is the uniform-reduction policy more or less efficient than the pollution-tax program? In other
    words, will the total cost of abatement be larger or smaller under the uniform-reduction
    policy?
b. Is the city more or less likely to grow under the uniform-reduction policy? Demonstrate using
    a graph.

5. A consulting firm issued a report estimating the economic impacts of moving a professional football team from city A to city B. The study made the following assumptions:

    i) Total attendance at the football games in city B will be 800,000 people per year.

    ii) The average ticket price will be $50.

    iii) The average fan will spend $30 on food, merchandise, and parking.

    iv) The spending multiplier is 2.2.

a. What is total direct spending per year?

b. What will the consulting firm's estimate be of total economic impact on city B?

c. If you were hired by an anti-football group to critique the firm's study, what would your main point or points be?

6. Under the implicit assumption that the employment multiplier is constant, when the demand curve for labor shifts (due for instance to a change in demand for exports), it shifts parallel to the original demand curve. What would the new demand curve look like under the assumption that the multiplier increases with city size?