Problem Set 4

Specific Factors and Government Policies

1. In the Extreme Specific Factors Model,

    a. What does a country's excess demand curve look like?

    b. What determines the relative price at which the excess demand curve crosses the vertical axis?

    c. Suppose a world of two countries that are trading freely, with the home country importing good X, and exporting good Y to Foreign. Suppose now that Home (only) experiences an improvement in its technology so that the factors employed in its X industry become more productive by, say, 10%. What will this do to
        i) its excess demand or supply curve,
        ii) the world equilibrium relative price of X,
        iii) the real wage of labor in Home's X industry
        iv) the real rental price of capital in Foreign's Y industry?

2. In the (Standard) Specific Factors Model of a small open economy that initially exports good X, analyze the effects on
    i) outputs of the goods, X and Y,
    ii) the real wage of labor,
    iii) the real rental price of capital in the X industry, and
    iv) the quantity of X exported

    due to the following changes (one at a time):

    a. A fall in the price of good Y, holding the price of good X constant.

    b. An increase in the size of the labor force.

    c. Destruction of a part of the capital stock employed in the Y industry.

3. Consider the Heckscher-Ohlin Model of a small open economy that produces labor-intensive good *X* and capital-intensive good *Y*, and that imports good *Y*. Find and compare the effects of i) a production subsidy for good *X*, and ii) a consumption subsidy for good *Y* on
   a) Output of *Y*
   b) Imports of *Y*
   c) Real wage of labor

4. The United States taxes consumption of cigarettes, which it exports. Use either the Heckscher-Ohlin or the (Standard) Specific Factors model with free trade to answer the following:

   a. Assuming (unrealistically) that there are no other distortions at home or abroad, how does this tax affect the consumption of cigarettes and the welfare of consumers in the US ***and*** abroad?

   b. Without doing a formal analysis, sketch how you think your answer to part (a) would change if instead the tax were motivated by a negative consumption externality – that smoking cigarettes inflicts a cost on society – and the consumption tax was set equal to that?