Exercise 3

Problem 1: A country's output vector is $X = (2, 2, 1)$, the world's output vector is $X^w = (55, 100, 110)$, the price vector is $p = (4, 4, 3)$, and the commonly used input output coefficients are

$$\begin{pmatrix} 1 & 2 & 1 \\ 1 & 1 & 1 \\ 2 & 1 & 1 \end{pmatrix}$$

where the first row describes labor coefficients, the second row describes land coefficients, and the third row describes capital coefficients. All countries have identical homothetic preferences and balanced trade.

a) Describe the country's pattern of commodity trade.

b) Describe its pattern of trade in factor content.

c) What are the equilibrium factor prices?

Problem 2: Carry out the empirical exercises that you find at the end of chapter 2 in the Feenstra book. You can download the data and stata do files at this URL:
http://cid.econ.ucdavis.edu/Books/Graduate/Chapter-2.zip

Problem 3: Consider the new trade Dixit-Stiglitz monopolistic competition model à là Krugman (AER 80).

a) Solve the theoretical problem 5.2 in the Feenstra book.

b) Solve the model in Krugman AER 80 for the equilibrium number of firms.

c) Analyze how the integration of two equally sized (i.e. $L = L^*$), formerly autarkic countries affects the number of firms in each country, the total number of products available, and the utility of consumers.