UNIVERSITY OF OSLO
DEPARTMENT OF ECONOMICS

Postponed exam: **ECON4415 – International trade**

Date of exam: Wednesday, January 9, 2013

Time for exam: 09:00 a.m. – 12:00 noon

The problem set covers 3 pages (incl. cover sheet)

Resources allowed:
- No resources allowed

The grades given: A-F, with A as the best and E as the weakest passing grade. F is fail.

Problem 1: (25 points)

a) Explain the concept of comparative advantage.

b) Explain why countries may gain from trade. Use a diagram as the basis for your explanation.

c) Does trade between similar countries give rise to gains? If so, under what circumstances?

Problem 2: (25 points)

a) State the Rybczynski theorem.

b) Explain the Rybczynski theorem using a graphical approach.

Problem 3: (25 points)

a) In a model with two countries and monopolistic competition, the expression

$$\frac{n}{n^*} = \frac{(L/L^*) - \tau^{1-\sigma}}{1 - \tau^{1-\sigma}(L/L^*)}$$

can be used to discuss the concept of the Home market effect. Use the expression above to explain and investigate this concept.

b) Germany has relatively large market for cars as compared to France. According to trade theory, would we expect Germany to become a net exporter or net importer of cars to/from France?

Problem 4: (25 points)

In a new economic geography model discussed in the curriculum, there are two economies (North and South) and two sectors, agriculture and manufacturing. Labor is sector specific. Workers in agriculture are immobile while workers in manufacturing are geographically mobile. Let the price in the agricultural sector be the numeraire, and assume that each economy is endowed with $(1 - \mu)L/2$ agricultural workers. As for manufacturing workers, they are mobile across the two economies. The world

1

endowment of manufacturing workers is μL. For your assistance the expressions for equilibrium nominal and real wages are given below (notation not specified):

$$w_M^N = \left[Y^N \left(P_M^N \right)^{\sigma-1} + Y^S \left(P_M^S \right)^{\sigma-1} T^{1-\sigma} \right]^{\frac{1}{\sigma}}$$

$$w_M^S = \left[Y^N \left(P_M^N \right)^{\sigma-1} T^{1-\sigma} + Y^S \left(P_M^S \right)^{\sigma-1} \right]^{\frac{1}{\sigma}}$$

$$\omega_M^N = \frac{w_M^N}{\left(P_M^N \right)^{\mu}}$$

$$\omega_M^S = \frac{w_M^S}{\left(P_M^S \right)^{\mu}}$$

a) What determines the real and nominal wage this economic geography model? Explain.

b) Explain how trade liberalization affects real and nominal wages?

c) Using the above expressions, explain the impact on real and nominal wages if a manufacturing firm moves from North to South.

d) Based on the above expressions, derive the condition for agglomeration of the entire manufacturing sector in the North to be a sustainable equilibrium. Discuss the factors affecting whether this condition will hold.