

# Mock Final Exam

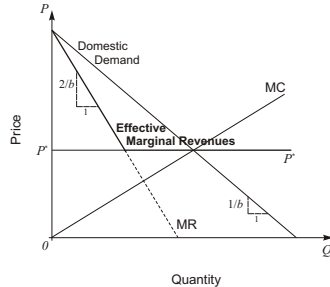
December 2, 2003

**Time:** 50 minutes  
**Total score:** 50 points

## 1 Horizontal Foreign Direct Investment: 10 minutes

A domestic monopolist faces no competition in the Home market but can sell to the world market at a price  $P^*$ .

- Depict the amount of goods that the monopoly will choose to export in the absence of transportation costs.
- Now suppose there are transportation costs  $\tau$  per unit sold abroad ( $\tau < 2/b$ ). Depict monopoly profits from exports.
- Alternatively, the monopoly can open a foreign subsidiary and sell to the world market from the new location at no transportation cost. Depict profits at the foreign subsidiary. If there are some fixed costs to open a foreign subsidiary, how large can they be at most to make horizontal FDI worthwhile?



## 2 Import Tariff in a Single Industry: 10 minutes

Home is a large country and a net importer of cars.

- Is Home's autarky price for cars above or below current world price?
- Draw demand and supply in the Home country and depict imports at some world market price.
- Show the overall welfare effect of a tariff on cars. Is it positive, negative or ambiguous?

### 3 Terms of Trade and Trade Policies for Single Industries: 10 minutes

Home is a large country. Its governments' sole intention is to distort its terms of trade favorably through trade policy. You may answer the following questions for single industries and need not consider the economy as a whole.

- Will Home tax or subsidize imports?
- Will Home tax or subsidize exports?

### 4 Technological Spillover: 10 minutes

Home is a *small* country and a net importer of software.

- Is Home's autarky price for software above or below current world price?
- Draw demand and supply in the Home country and depict software imports at some world market price.

A study by the Home government reveals that hosting software production at Home exerts a positive externality on neighboring industries.

- Draw a (downward sloping) marginal social benefit curve into the price-quantity diagram.
- Show the overall welfare effect of a tariff on software. Is it positive, negative or ambiguous?

### 5 External Economies and Infant-industry Protection: 10 minutes

There are external economies of scale from agglomeration of refrigerator manufacturing in one single location. By historic coincidence, all refrigerators for the world are currently made in Alaska.

- Depict world equilibrium under a forward-falling supply curve when refrigerators are made in Alaska.
- Suppose that, at any quantity, Antarctica could make refrigerators more efficiently. Depict Antarctica's potential supply curve.
- How large does an import tariff have to be in Antarctica so that the first refrigerator maker will locate in Antarctica? You may suppose that any firm can sell refrigerators from Antarctica to the world market irrespective of the import tariff.
- Does the world benefit from infant-industry protection for Antarctica fridges?