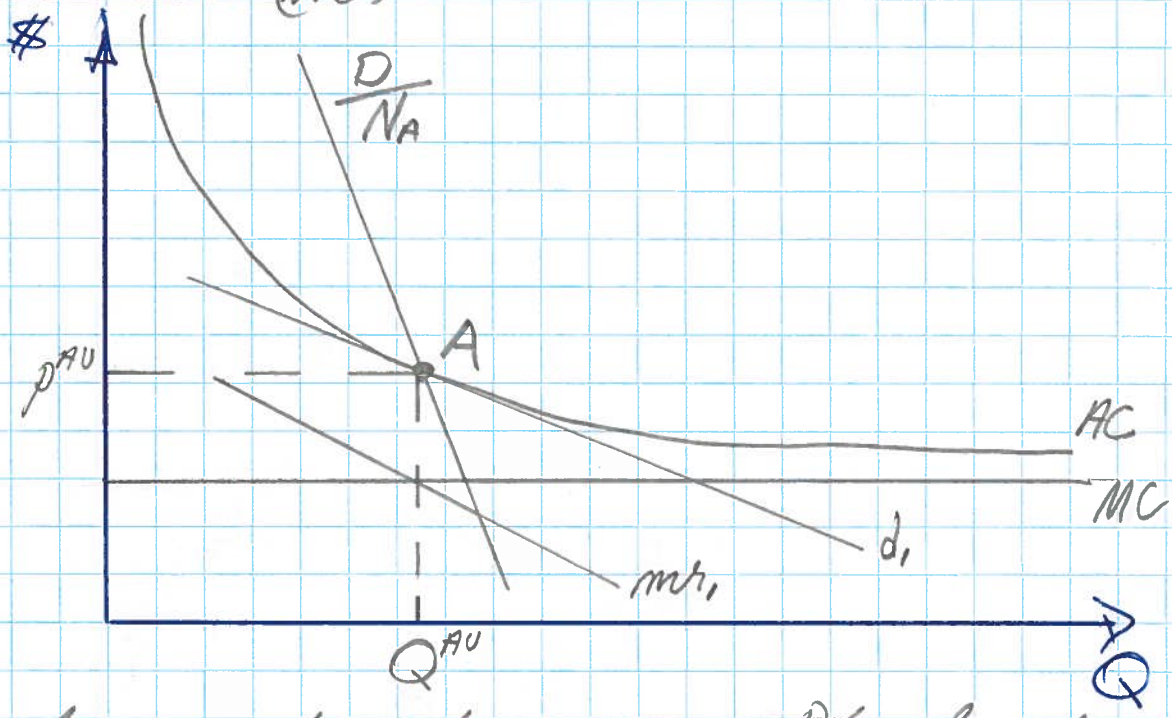
SOLUTIONS ECO 3111 W 2013
TRADE 2nd MID-TERM

#1 a) In the monopolistic competition model, we assume increasing returns to scale (IRS) which we represent as a decreasing average cost curve (AC) and a constant marginal cost curve (MC).



CAR INDUSTRY IN ONE COUNTRY

On the demand side, curve D/N_A denotes the quantity demanded per firm where D is total industry demand, N_A is total number of firms, and all firms ask the same price.

Curve d_1 denotes the demand facing one firm when all other firms keep their prices at level p^{AU}. It is flatter than curve D/N_A because on d_1, only one firm reduces its price and consequently, it can attract more consumers.

Point A denotes a long-run equilibrium because it satisfies two conditions:

① $p^{AV} = AC \Rightarrow$ zero profits due to free entry

② $mr_1 = d_1 \Rightarrow$ Each firm is maximizing its profits given the price of other firms, thus corresponding to a Nash equilibrium.

b) In the short-run, we assume that the number of firms remains the same. Consequently, with trade, total demand is $2D$ and the total number of firms is $2N_A$. Curve D/N_A is therefore unchanged in the short run.

Curve d_1, however, becomes flatter because at one firm lowers its price, it can capture additional consumers from the other country as well. For this reason, each firm wants to decrease its price.

In the new, short-run trade equilibrium, the price drops below p^{AV} and the quantity above Q^{AV}. Since the relevant demand is still on curve D/N_A, the price is below the average cost of production and each firm makes a loss.

c) Since firm profits turn negative after opening up to trade, some firms will leave the industry. With a smaller number of firms, each firm can produce more as individual firm demand increases. This leads to a lower average cost and losses are removed.

In the long-run, profits are back to zero with trade also. However, the total number of firms operating in both countries is larger than under autarky and prices are lower as each firm produces more quantities, which lowers their average costs.

d) Consumers benefit from trade for two reasons:

① Prices are lower than under autarky.

② Consumer choices are expanded as they can choose from more firms.

As for firms, their profits remain unchanged at zero under both trade and autarky.

#2 Within the framework of the H-O model, it turns out that wages can be equalized by simply opening up to trade.

Indeed, with trade, goods prices are equalized between countries. And we have seen that wages depend only on the relative price of goods. Consequently, as countries begin to trade, wages are equalized.

The above is referred to as "FACTOR PRICE EQUALIZATION". It is as if labor were exported through the labor-content of the goods instead of direct emigration.

The above prediction does not correspond well to reality as wages are not equalized between trading countries. This is attributed to the following discrepancies from the H-O model:

① Technologies are not identical.
② Trade is not entirely free.
③ Some goods are non-tradeable.
④ Some countries may be fully specialized in some goods, etc...