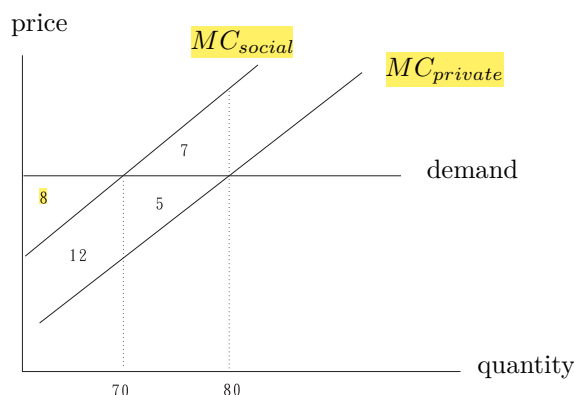個經作業 (古慧雯)

1. Landsburg, Ch. 13 #28

2. A competitive firm pollutes the air. The following graph shows the demand for the firm's product and the private and social marginal cost curves. The numbers in the graph represent areas.

(a) Suppose there are no transaction costs, that there is no legal penalty for polluting, and that it is impossible for the neighbors to move. What quantity does the firm produce? Give a concrete description of a deal that might be struck between the firm and the neighbors.

(b) Suppose transaction costs are so high that negotiation is impossible, and that it would cost the neighbors $6 to move. Under each of the following scenarios, determine whether or not the neighbors move, and determine how much the firm produces.

    i. The firm faces no penalty for pollution.

    ii. The firm must reimburse the neighbors for all pollution damage.

    iii. Reconsider scenarios i–ii. Which one is more efficient?

3. J 有 20 塊餅乾, 10 包香煙。K 只有 30 塊餅乾。兩人爲室友, J 嗜煙, K 討厭二手煙。若 J 抽煙 s 包, 吃餅乾 x_J 塊, 而 K 吸入 s 包的二手煙, 並吃餅乾 x_K 塊, 兩人的效用爲: $u_J(x_J, s) = x_J + \ln(1 + s)$, $u_K(x_K, s) = x_K + \ln(11 - s)$。

(a) 請在 Edgeworth Box 中繪出通過 $s = 6$, $x_J = 25$ ($x_K = 25$) 兩人之無異曲線, 並標出兩人效用做增的方向。

(b) 設 J 有權吸煙, 愛抽幾包就抽幾包, 但 K 可以餅乾換得 J 之香煙, 減少二手煙的吸入量。若 J, K 的協商會達 Pareto 效率性, 請問 J 將抽煙幾包?

(c) 若 K 有拒吸二手煙的權利, J 必須以餅乾換取抽煙的許可。若 J, K 餅乾換香煙的交易具 Pareto 效率性, J 為獲得抽 1 包煙的權利, 給了 K 幾塊餅乾?