

ECON 267 Homework 5

Due in class on March 22, 2006

1. Problem 2 on Page 295 (Pepall et al.)

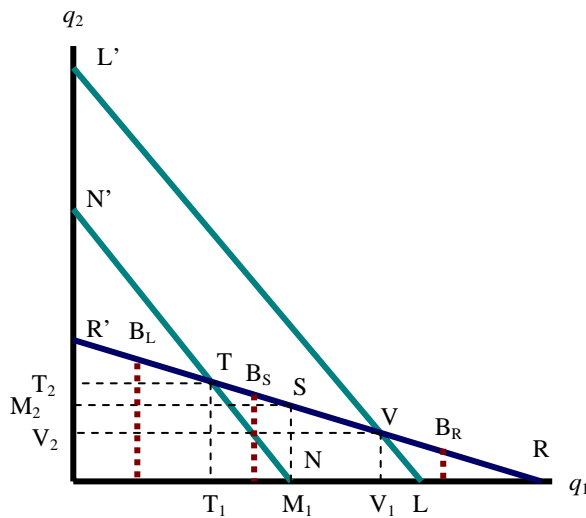
(Correct for the typo in Part (a):

Suppose that in stage one the incumbent invests in capacity \bar{K}_1 . Show that in stage

two the incumbent's best response function is $q_1 = 20 - \frac{1}{2}q_2$ when $q_1 \leq \bar{K}_1$ and

$q_1 = 15 - \frac{1}{2}q_2$ when $q_1 > \bar{K}_1$.)

2. The following graph shows the Dixit model of capacity commitment to deter entry. Assume that the incumbent in Period 1 installs capacity $K1$. For output less than $K1$, the incumbent operates on the higher response function, $L'L$. For output greater than $K1$, the incumbent operates on the lower best response function, $N'N$. $R'R$ is the best response function of the entrant (it also shows the possible locations of the entrant's break-even point).



a. If the entrant's break-even output occurs at a point to the right of V , as in B_R . Is it possible for the incumbent to deter entry completely? What capacity level $K1$ would be chosen by the incumbent in Period 1?

b. If the entrant's break-even output occurs at a point between S and V , is it possible for the incumbent to deter entry completely? If yes, what capacity level $K1$ would be chosen by the incumbent in Period 1 in order to deter entry completely?