

14.27 Problem Set #3

Due on the day of lecture on Auctions.

1. Pick a firm that was an early pioneer or market leader in a market, but which has now lost its leadership position. See what you can find out about the firm and why it lost its lead. How does your explanation relate to explanations given in class for why pioneers may tend to fall behind?
2. Consider a model in which two firms sell to a continuum of consumers in two periods. The consumers are differentiated by a taste parameter, which is uniformly distributed on $[0,1]$. The two firms sell products that are located at the opposite endpoints of the product space. Assume that consumers get utility $v - td$ if they buy a product at a firm located a distance d from their ideal point (and that they always buy from at most one firm and that they buy from neither firm if they would receive negative utility from both). Suppose that in the first period firm 1 sold to all consumers in $[0, x)$ and firm 2 sold to all consumers in $(x, 1]$. Suppose that consumers have switching costs so that their utility is only $v - w - td$ if they switch and purchase from the other firm in period 2.

Under what conditions (i.e. give an equation involving v , w , c , t and x) will the second period equilibrium involve firm 1 setting its price equal to $v - tx$? Assuming that such high prices will prevail in the second period, solve for the equilibrium prices in the first period (where firms recognize that besides wanting to earn first period profits they want to gain market share because of the second period profits). How are aggregate profits affected by the presence of switching costs?