Economics 380: Midterm Solutions 1

16 November, 2006

1. No firm will defect if

$$\frac{1}{1-\delta}\frac{\pi^M}{2} \geq \pi^M + \frac{\delta^{K+1}}{1-\delta}\frac{\pi^M}{2}$$

If $\delta = 3/4$, this becomes

$$2\pi^M \geq \pi^M + \left(\frac{3}{4}\right)^{K+1}(2\pi^M)$$

Rearranging,

$$\frac{1}{2} \geq \left(\frac{3}{4}\right)^{K+1}$$

(a) If $K = 1$, then $\delta^{K+1} = 9/16 > 1/2$. Thus a firm will defect.
(b) If $K = 2$, then $\delta^{K+1} = 27/64 < 1/2$. Thus no firm will defect.

2. Circle differentiation.
(a) They would locate at opposite points of the circle.
(b) Their market share would stay the same.
(c) Prices fall.
(d) A's profits decrease. Moving closer is thus a bad idea.

3. Enron.
(a) It was surprising because the hidden debts were \$8bn, but the firm had market cap of \$60bn.
(b) Enron was the market maker in the long term gas contract market. This meant that Enron was acting like a bank, borrowing money from people who buy gas, and lending to people who sell gas. People had to trust it to fulfill these contracts (e.g. deliver gas in 5 years time).
(c) From McAfee: Banking, Insurance, eBay, Intel.
Others: University education (reputation for quality), airlines (safety), car makers (reliability).