Econ 243 September 24, 2018

Entrep Summit: beer/whiskey panel. what did I get out of the panel? 2 very nice whiskeys and an OK Oktoberfest beer! but also institutional details on distribution that we'll get to later this term.

Bertrand. first of a series of models as we move from monopoly to duopoly. will follow up with Nash-Cournot [John Nash (d 2015) "A Beautiful Mind" from of Bluefield WV with relatives in Roanoke; Antoine Augustin Cournot, a 19th century French economist (d 1877); John Bertrand also a 19th century French economist (d 1900)].

we will look at a more general n-opoly model, but looking at a 2-firm market is adequate for many of our purposes. exceptions: M&A, how many firms can a market support.

= motivating story:

logic of undercutting rival, but then rival can in turn undercut

old days, friend who would go to the airport with ticket in hand, then go to rival's counter. almost always got a better price. I've not tried – I'm on Roanoke routes where there's little rivalry.

but on occasion I do get calls from cell phone providers. what's the marginal cost? can you negotiate a better deal?

= set up 2 x 2 one-off game [repeated games later]

= origin Oskar Morgenstern and John von Neuman at Princeton, John Nash formalized several game-theory equilibrium concepts.

= this one the Prisoner's Dilemma

Profits [*no fixed costs*]		Firm II	
		Keep Price	Lower Price
Firm I	Keep	100, 100	0, 150
	Lower	150, 0	75, 75

what stops? MC!

so equilibrium is p = MC identical to PC

example of OPEC: can detect cheating? not readily. so OPEC only holds together when prices are rising, and falls into disarray when prices fall.

= one constraint we'll look at later: product differentiation. book details, but we have not developed the relevant algebra. yet.

= if different firms have different MC, then the low-cost producer cuts until p < MC - α, a bit below the higher-cost firm. "corner solution"

= if supply is constrained, then limits on how much can cut price.

Capacity limit of the firms k_1, k_2 so max output $k_1 + k_2$

claim: never makes sense to set p < D($k_1 + k_2$)

graphical analysis: can shift D left by k_1, to get D'and then draw MR'

as long as the point MC = MR is to the right of $k_1 + k_2$ then [circled where MC = MR']

MR > MC so makes sense to increase output. so will always product at max.

need to have capacity sufficiently low that is constraint. again, "corner solution"

examples of constrained capacity:

airline travel. recent experience that seats always full. but I also noted institutional changes that make bargaining at the ticket counter no longer works.

[*example of unconstrained capacity: de Beers and diamonds. realistic threat that can flood the market as has inventory equal to many years of jewelry sales at current prices*]

[*example of RRs: can detect cheating? not readily. so appointed independent body to handle interfirm fees, which then appointed inspectors. so couldn't discount by misclassifying goods.*]

p

MC

K_1 K_2 K_1+K_2

MR'

D'   Q'

D