This should be revision, but it is good stuff to be reminded of...

Structure of IO



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Econ 465 Market Power and Public Policy

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Competition in agriculture

- In poorest nations of the world, 50 to 80 percent of population live on farms
- Less than 2 percent in the US, less than 10 percent in Europe
- Highly skewed distribution: largest 2.6 percent of wheat farms raise roughly half of all wheat
- However, still very large numbers of firms: the 2 percent of farms producing half the grain comprise 27000 farms
- Can any one farm have any effect on price of corn?
- How difficult is it to enter farming?

Cost structure: textbook depiction



Cost structure of a farm

- Fixed costs
 - Mortgage payments
 - 2 Taxes
 - Oppreciation of equipment (why?)
- Variable costs
 - Preharvest costs (\$31 per acre of corn, 1971 prices)
 - Labor: about 4 hours
 - Seed
 - Fertilizer
 - Fuel
 - Insecticides/herbicides
 - e Harvesting costs (\$10 per acre of corn, 1971 prices)
 - Labor: about 2 hours
 - Fuel
 - Trucking

Is this an accurate depiction of what we think the farmer looks like?



Cost structure of a farm

What do you think the average and marginal costs of the farm look like?

Profit maximization decision of the corn farmer: Revision

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$$\pi(q) = qP(q) - TC(q)$$

- What's $\frac{dP(q)}{dq}$? Why?
- P = MC
- But is this enough?
 - MC at current production = 41 cents
 - What happens if price is 40 cents per bushel?
 - If price is 50 cents per bushel?

Market Equilibrium: Revision



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Welfare and Efficiency: Revision

- Social welfare = Consumer Surplus + Producer Surplus
- Consumer surplus: area under the market demand curve minus price paid by consumers
- Why is this a measure of consumer welfare?

Consumer surplus: revision

- Quasi-linear utility: $U(x_1; x_2) = g(x_1) + x_2$
 - Usually we interpret x₂ as "everything else"
 - Budget constraint: $p_1x_1 + p_2x_2 = m$

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$$g'(x_1) = \frac{p_1}{p_2}$$

- If p2 = 1, marginal utility of another unit of x_1 is equal to p_1 dollars
- What is the total dollar value of utility you get from Q units of good 1?

 $W(Q) = \int_0^Q p_1(q) dq$

• Consumer surplus is this dollar value minus the dollar amount you pay (*PQ*).

Producer surplus

- Producer surplus: easier. This is profit (not inclusive of fixed cost).
- Why does the competitive outcome maximize social welfare?
- What would happen to sum of producer and consumer surplus if $P > P_0$?
 - What is the effect of limiting the number of taxicabs in a city?
 - Is it better to limit taxicabs, or to charge an entry fee or a tax?
- When do markets fail to be efficient?