Chapter 12: Capturing Surplus

1. Name of the game: Capture surplus!

A. Capture surplus via *price discrimination*
   (avoid/reduce extent of having to cut $P$ on marginal units, and of having to charge a *uniform price* on all units sold)

B. Types of price discrimination:
   (1) **First-degree**: set $P$ of each unit at the reservation price of the consumer who buys it (e.g., auctions, used-car lots)
   (2) **Second-degree**: consumer gets quantity discounts
   (3) **Third-degree**: charge different price for different market segments (e.g., consumer types)

C. Requirements for price discrimination
   (1) Firm must have some market power
   (2) Firm must have some info about different amounts that different people will pay for the product
   (3) Firm must be able to prevent resale (people who bought at a lower price selling to people who would otherwise buy at a higher price)
2. First-degree price discrimination
   A. If possible, charge each consumer his/her exact reservation price
   B. Here, MR schedule = P schedule!
   C. With perfect first-degree price discrimination:
      • Producer captures *all* the surplus
      • By making more purchases possible, producer increases output and total surplus (relative to conventional market power situation) – zero DWL
3. Second-degree price discrimination
A. Quantity discounts (if not based on cost considerations) – e.g.,
   • multipart or block tariff
   • subscription charges + usage charges
B. Here, MR schedule gets closer to P schedule, firm extracts more surplus than with uniform pricing
C. example: block tariff (w/2 blocks)

D. example: subscriber charge + usage charge

\[\text{at } P = P_1, \text{ consumer makes } Q_1 \text{ purchase, gets surplus of } S_1, \]

solution: add a "subscriber charge" of \( S_1 \), to extract the whole surplus
4. Third-degree price discrimination
   A. Charge different prices to different market segments (business vs. vacation travel, seniors vs. others, youth vs. others, peak vs. off-peak fares, coupons/rebates)
   B. Basic rules
      • when $\varepsilon$ is low, set high $P$
      • in all cases, $MR = MC$
      • $MC$ must be same for all units

5. Tie-in sales (e.g., if buy a copier, require purchasers to use own-make copy paper)

6. Bundling
   A. Require consumers to purchase a package (e.g., cable TV channels; Disney World admissions); no opportunity to buy individual components separately
   B. if consumer demands for two related (but distinct) goods are negatively correlated, bundling can raise profit
   C. if consumer demands are positively correlated, bundling can't raise profit
6. Bundling (continued)

D. e.g., negative correlation:

<table>
<thead>
<tr>
<th></th>
<th>reservation price</th>
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<tbody>
<tr>
<td></td>
<td>computer</td>
</tr>
<tr>
<td>customer 1</td>
<td>$1,200</td>
</tr>
<tr>
<td>customer 2</td>
<td>1,500</td>
</tr>
<tr>
<td>MC</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Here, without bundling, optimal prices are $P = 1500$ and $P = 600$; here, profit = 800. With bundling, set total price of $1800$. Here, will sell two computers and two monitors, and receive profit = 1000.

E. positive correlation:

<table>
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Here, without bundling, set $P=1500$ and $P = 600$; total profit = 800. With bundling, set combined price at $2100$, but still can earn a profit of only 800.
7. Advertising

A. Usual story: consider both MR and MC of advertising

B. i.e., advertising will shift up P and MR lines, but will also shift up MC schedule – so, spending more on ads is not a "given"