Lecture 13
- Costs in the long run
- Market structure
- Perfect competition
- A long run equilibrium in PC

The long run
- No fixed costs
  - firms can enter or exit (open or close)
  - firms can change size

Long run cost curves
- Costs in the long run
- Market structure
- Perfect competition
- A long run equilibrium in PC

Review: short-run production decisions...
1) P>AVC
2) MC=MR=P
Review: the forest for the trees

• S & D determine equilibrium $P^*$ and $Q^*$
• Demand
  – households maximize well-being s.t budget
  – assume
    • (1) more better
    • (2) I curves don't cross
    • (3) I curves bow in
  ⇒ demand curve downward sloping

Review: continued

• Supply
  – assume firms maximize $\pi$
  – in SR
    • produce if $P>\text{AVC}$
    • produce s.t. $P=\text{MC}$
  – In LR, to maximize $\pi = P \times Q - TC$
  • need to discuss price
  • price depends on market structure

Market structure: 2 extremes

• **Perfect Competition** (Ch.11)
  – many suppliers
  – take price as given
  – individual firms don’t affect price
  – eg. Nebraska wheat farmer
  – eg. copy store
• **Monopoly** (Ch.12)
  – 1 firm
  – sets prices
  – eg. Microsoft
  – eg. Washington Gas

Assumptions of perfect competition

• 1) Homogeneous product
• 2) Perfect information
• 3) Each firm small relative to market.
  • Min LRAC small.
• 4) Free entry and exit.
  And (not in Parkin) …..
• 5) No "external" costs or benefits.
Example from book: Swanky's Sweaters

Swanky's short-run decisions:

\[ \pi = PQ - TC = Q(P - ATC) \]

Long run consequences

- Firms can enter/exit the industry
- Firms can change plant size

Back to Swanky

\[ \pi = PQ - TC = Q(P - ATC) \]

Equilibrium

\[ \pi = 0 \]

Changes in plant size
Equilibrium again

Equilibrium in perfect competition

- 1) $P = MC$
- 2) profits = 0
- 3) produce at minimum of LRAC

$\rightarrow$ EFFICIENT

Figure 10-7
Alternative Short-Run Profits of a Competitive Firm

Figure 10-8
The Effect of New Entrants

Figure 10-9
Short-Run Versus Long-Run Profit Maximization for a Competitive Firm

Figure 10-10
A Typical Firm When the Industry Is in Long-Run Equilibrium
Figure 10-11
Long-Run Industry Supply Curves

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Recall definitions of efficiency

- **Production efficiency**
  - cannot produce more of one good without
    - producing less of another good
    - using more inputs
  - points on the PPF
- **Economic efficiency** (or Pareto efficiency)
  - cannot make any one person better off without making another person worse off

Table 1: Total public spending as a share of GDP (2004-2007 average)

<table>
<thead>
<tr>
<th>Low (Below 40%)</th>
<th>Medium (41-49%)</th>
<th>High (50% and above)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Korea</td>
<td>27.3%</td>
<td>Luxembourg</td>
</tr>
<tr>
<td>Inland</td>
<td>34.2%</td>
<td>Norway</td>
</tr>
<tr>
<td>U.S.</td>
<td>36.7%</td>
<td>Austria</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>36.9%</td>
<td>Ireland*</td>
</tr>
<tr>
<td>Japan</td>
<td>36.9%</td>
<td>Iceland**</td>
</tr>
<tr>
<td>Spain</td>
<td>38.7%</td>
<td>France</td>
</tr>
<tr>
<td>New Zealand</td>
<td>38.9%</td>
<td>Denmark</td>
</tr>
<tr>
<td>UK</td>
<td>43.9%</td>
<td>Sweden</td>
</tr>
<tr>
<td>Canada*</td>
<td>39.9%</td>
<td>OECD Avg.</td>
</tr>
<tr>
<td>Netherlands</td>
<td>45.5%</td>
<td>Spain</td>
</tr>
<tr>
<td>Germany</td>
<td>45.9%</td>
<td>Portugal</td>
</tr>
<tr>
<td>Italy</td>
<td>40.5%</td>
<td>Poland</td>
</tr>
<tr>
<td>Finland</td>
<td>49.3%</td>
<td>France</td>
</tr>
<tr>
<td>Belgium</td>
<td>40.6%</td>
<td></td>
</tr>
</tbody>
</table>

*Canada 2004  **Iceland 2004-2006 average  Source: OECD

Source: NIPA tables, ERP

A perfectly competitive equilibrium

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Federal, State, and Local Share of GDP

Source: NIPA tables, ERP
Adam Smith

- Professor of Moral Philosophy at the University of Glasgow (1760s)
- In 1776 he published his book:

Wealth of Nations

- Nature
  - "invisible hand"
    - "the private interests of men are led in the direction which is most agreeable to the interests of the whole society"
  - self interest
    - "it is not from the benevolence of the butcher, the brewer, or the baker that we expect our supper"

The point is, ladies and gentlemen, greed, for lack of a better word, is good. Greed is right. Greed works. Greed clarifies, cuts through, and captures the essence of the evolutionary spirit. Greed, in all its forms. Greed for life, for money, for love, for knowledge, have marked the upward surge of mankind. And greed, you mark my words will not only save Teldar Paper, but that other malfunctioning corporation called the USA.

Gordon Gekko (Michael Douglas) in Wall Street