ch11 → perfect competition m→m   easy to entry the
ch12 → monopoly    1→m                            market.
ch13 → monopolistic. m→m.
        生活中大部分↑

ch14 → oligopoly : n个大企业占据市场.
    门槛: hard to entry the market.
            natural
            legal.
    duopoly → two producers.
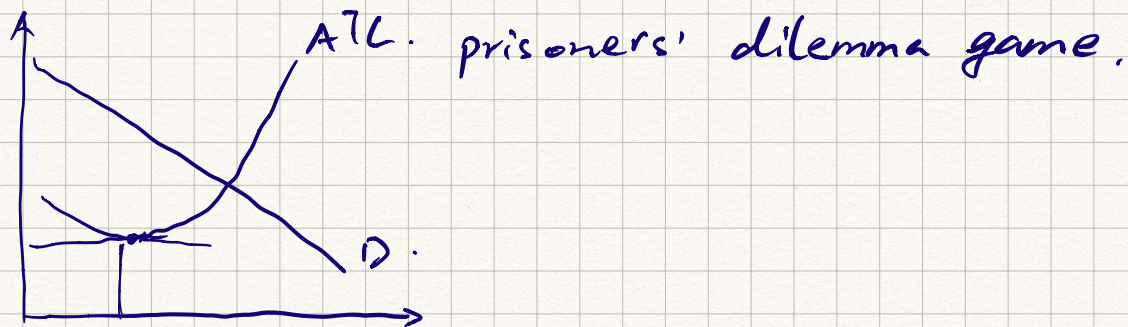


                ATC. prisoners' dilemma game.

Prisoners' dilemma games.



A: if B confess → confess
   if B deny → confess.
the same works for B.

* Nash equilibrium → both A and B confess,
    the action of A is interdepent with the action
    of B.
Firms are interdependent and face a tempetition to
cooperation.
Cartel: a group that enter a collusive aggrement.
        B

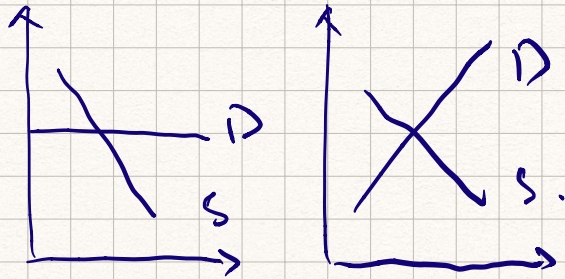|  | cheat | comply |
|---|---|---|
| cheat | 0 / 0 | -1 / 4.5 |
| comply | 4.5 / -1 | 2 / 2 |

A: if B cheats → cheat.

B: if B comply → cheat.

the same work with B

Both the A and B will cheat.

profit maximization => $MC = MR$.



Game of chicken.     R&D => Research & Development.

|  | R&D | X |
|---|---|---|
| R&D | 5 / 5 | 10 / 1 |
| X | 10 / 1 | 0 / 0 |

A: if B R&D → X

if B X → R&D.

Dominant's strategy

independent with other's action.

Punishment strategy:

tit-for-tat stategy. :

A cheated → B cheated. in the next time.

trigger stategy

now.

sequential entry game.

$$A < \begin{array}{l} \text{monopoly} \\ \text{competitive} \end{array} < \begin{array}{l} \text{enter } \frac{+50}{10} \\ \text{out } w\%^0 \\ \text{out } -50\%^{-10} \\ \text{enter } 0\%. \end{array}$$

externalities examples:

| | Production | Consumption |
|---|---|---|
| Negative | pollution | smoking |
| Positive | bee & flower | vaccination. |

MPC & MEC & MSC.

MSC = MPC + MEC.



MSC

DWL ↕ MEC.

MC (S).

D.