

Duopoly: an oligopoly
consisting of 2 firms

Collusion: Sellers cooperate
to raise their joint
profits

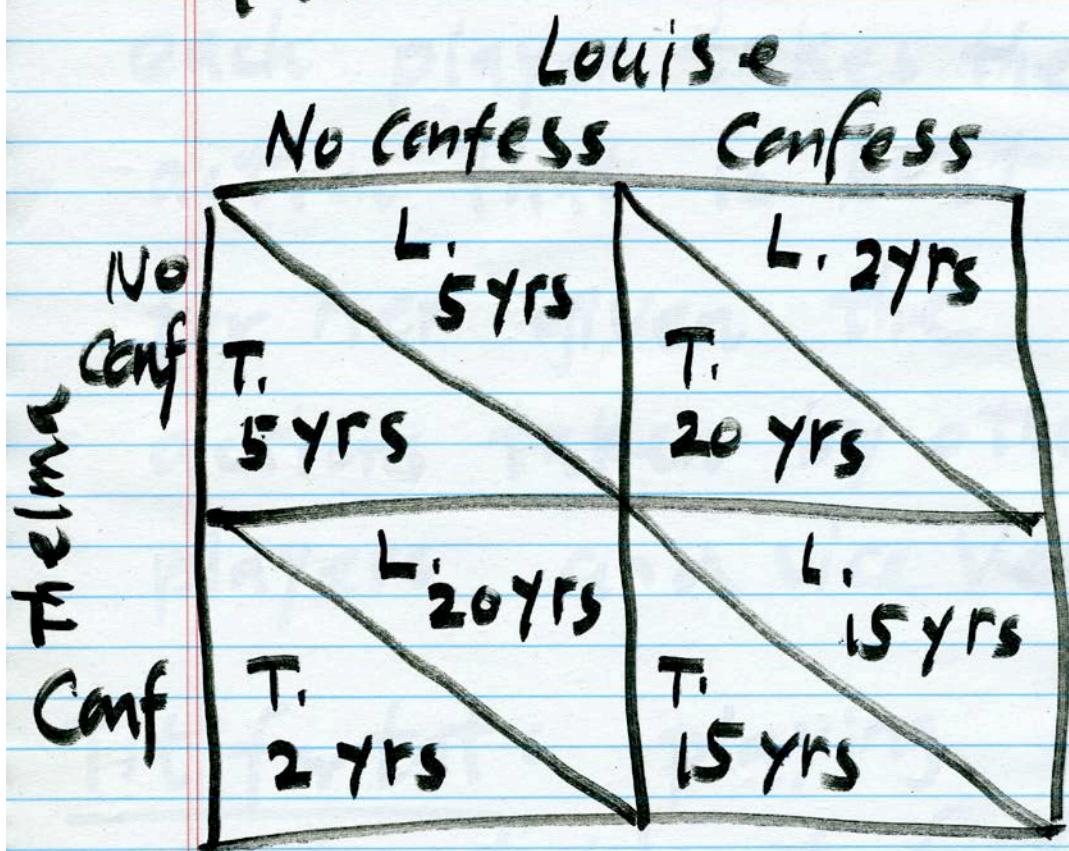
Cartel: an agreement
among several producers
to obey output restrictions
to raise joint profits

Interdependence :
when a firm's decision
significantly affects
the profits of other
firms

Game theory : study of
behavior in situations
of interdependence

Payoff : reward received
by a player

The Prisoners' Dilemma Game



Dominant strategy: Confess

Nash Equilibrium:

each player takes the action that is best for her given the actions taken by other players, and vice versa

Tit for tat: playing cooperatively at first, then do whatever the other player did in the previous period

Repeated interactions
can support tacit
collusion

e.g. by playing tit for
tat

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30m lbs 40m lbs



- Both better off if choose lower output
- but in each firm's individual interest to choose higher output

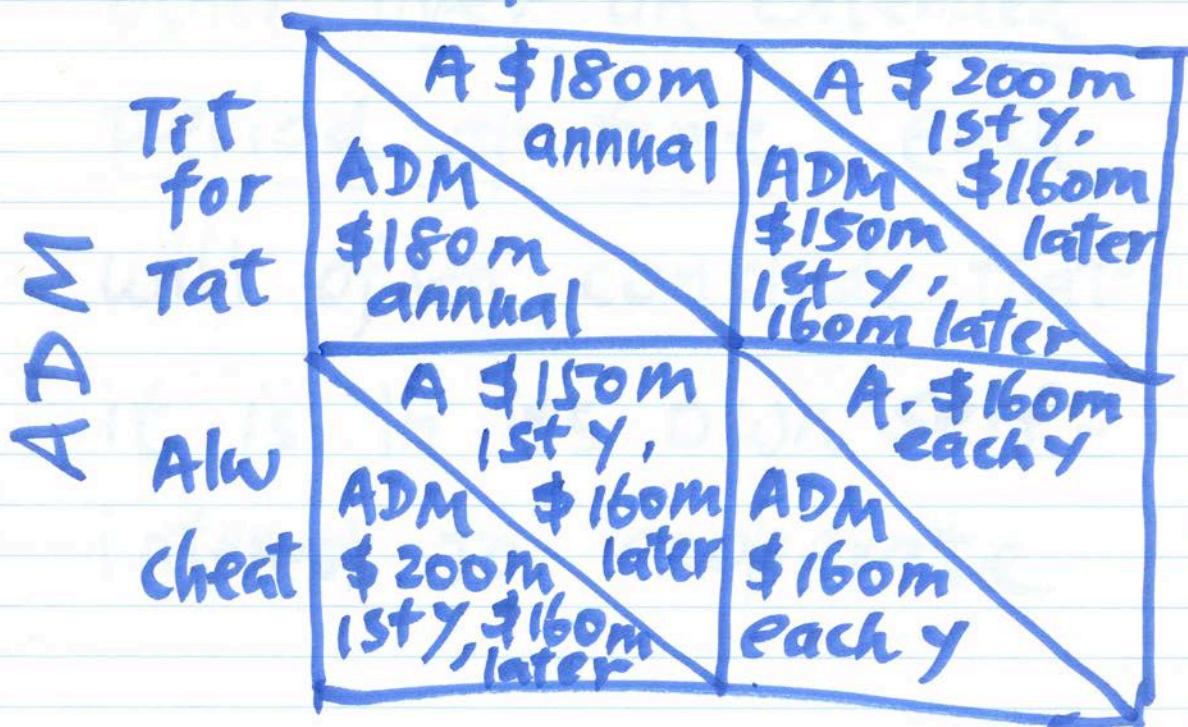
- Nash equilibrium or noncooperative equilibrium (40m lbs, 40m lbs)

Overcoming Prisoners' Dilemma : Repeated Interaction and Tacit Collusion

- Under some conditions, can tacitly collude

Ajionomoto

Tit for Tat Alw cheat



• When oligopolists expect to compete with each other over an extended period of time, each will often conclude that it is in its own self-interest to cooperate

Tacit Collusion harder:

- large # of producers
- Complex products
and pricing schemes
- Differences in interests
e.g. differences in
MC

differences in
original positions
(market shares)

• large bargaining
power of buyers