The market for Lemon

$S(q) = E[v(q') \mid q' \le q] - c(q)$

$q \in [0,1]$ = quality of used car

$c(q)$ and $v(q)$ are increasing in q

assume $v(q) \ge c(q)$ for all $q > 0$

optimall : all the used cars are sold.

get : in a perfectly competitive equilibrium, we can not get porato optimal

(second best : 0 surplus ← last class)

$v(q)$ willing

$c(q)$ willing to sell

Proposition : In a perfectly CE, q is an equilibrium quantity

iff $S(q) = 0 \quad (q < 1)$

$S(q) \ge 0 \quad (q = 1)$

Condision:

guarantee ① get full effiviency $\Rightarrow q = 1$. ?

② never get full effiviency

$q = 1 \Leftrightarrow$ EQ

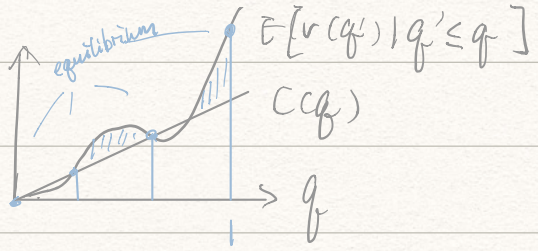
Proposition: The market for the lemon necessarily exhibit inefficiency.

if $c(1) > E[v(1)]$

worst → The market for lemon shut down completely if

$c(q) > E[v(q') \mid q' \le q] \quad \forall q \in (0,1]$

can shut down ↑ lead to ?



⇒ Death Spiral (market unravel, high quality are taken out)

⇒ adverse selection

bad quality drives out good quality

Ex: interdependent value

⇒ can even occur even the quality is observable

machanism alleviate the inefficiency.

① warrenties can seperate manufactory (signal quality) ⇒ costly

informed party try to signal

· imperfect solutions ⇒ moral hazard.

· competition in warrenty

excessive warrenties

② reputation for quality

③ screening ↑ uninformally party tries to screen

offer a menu of option deductibles, premierine.

↑ ricks. ⌣ combination

self-select →

recognize differences in taste

Ex. Health Care.

plan ① M (moderate) — two types of individuals — L Low risk 1/2

② G (generous) — H High risk 1/2

can not observe type of individuals, know present.

for insurance company.

Cost	M	G
L	40	60
H	70	100

worth for individual

Valuation	M	G
L	70	85
H	110	150

perfect information : Low → Moderate

High → Generous

? Competive