

ch9 Decision Making by Individuals and Firms

Opportunity costs again

because resources
scarce, true costs -
what you must give
up to get it

opp cost = Total Explicit
cost + Total
implicit cost

CPA Decision Making PM

- Explicit costs: cost that involve an outlay of money

- implicit cost: not require an outlay of money, measured by the value in \$, of benefits foregone

Total Opp Cost =
Total Explicit cost +
Total Implicit Cost

opp cost of an additional
yr of school

Explicit cost

Tuition

Books + supplies

Computer

Implicit cost

Foregone salary

Total Opp Cost =

Total Explicit cost +

Total Implicit Cost

Accounting Profit

revenue - explicit cost

Economic Profit

revenue - opportunity
cost

= revenue - explicit cost -
implicit cost

Economic Profit from Acquiring Teaching Degree

Value of increase in
lifetime earnings

(may call revenue
from teaching degree)

Explicit cost

Tuition

Interest paid on student
loan

Accounting Profit = Revenue -
Explicit cost

Implicit Cost

Income foregone during
2 yrs spent in school

Economic Profit =

Value of increase in
lifetime earnings -

explicit cost - implicit cost

Capital : total value of
assets of an individual
or a firm

Individual capital usually
cash in the bank, stocks,
bonds and ownership value
of real estate such as
a house

Business capital includes
equipment, tools,
inventory of unsold goods
and used parts

Implicit cost of capital -
income the owner of
the capital could have
earned if the capital
had been employed in
its next best alternative
use

- financing tuition with
a student loan same
as using her own funds

Principle of "either-or" decision making

- choose the one with the positive economic profit

other examples of implicit cost

- businesses run by owner should count owner's time in running business
- opportunity cost of self-owned capital

- rent or borrow assets, show up as explicit costs
- own its equipment - how much can be sold for and how much can be earned using those funds

Again

Economic Profits =

Accounting profits -
implicit cost (include
income foregone, implicit
cost of capital, opp
cost of owner's time)

Making "How Much" Decisions - use Marginal Analysis

- Not all decisions are "either-or"
- Price of gasoline ↑, people normally do not give up their cars, drive less, how much less

Working "HOM WNCM"

Marginal Cost of

producing a good:

additional cost incurred
by producing one more
unit of the good

Marginal cost of additional
years (computer languages,
app design methods,
graphics programs) of
schooling is increasing

Marginal cost - MC

But Marginal Cost can
be constant, increasing
or decreasing

Constant marginal cost -
e.g. plant nurseries, the
additional cost of growing
one more plant same

decreasing marginal cost -
due to learning effects,
for later units, less
defects

For some, marginal cost curve changes as # of units produced increases

e.g. auto production -
decreasing first batch of cars - workers iron out kinks and mistakes

then constant for next batch - workers settle in more predictable pace

then increasing - run out MC of factory space



For now, focus on
increasing marginal cost

Marginal
Cost



For NOM focus on

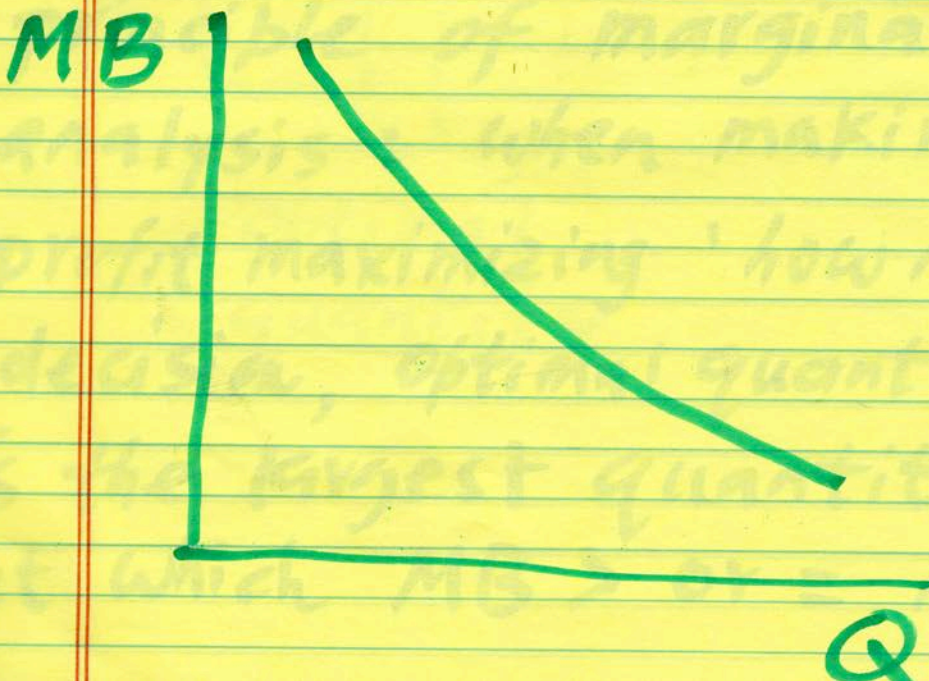
Marginal benefit of
producing a good -
additional benefit
earned from producing
one more unit

Decreasing marginal
benefit: each additional
unit of the activity
yields less benefit
than the previous unit

Marginal benefit MB

Marginal benefit of

Marginal benefit Curve:
how the benefit from producing one more unit depends on the quantity that has already been produced



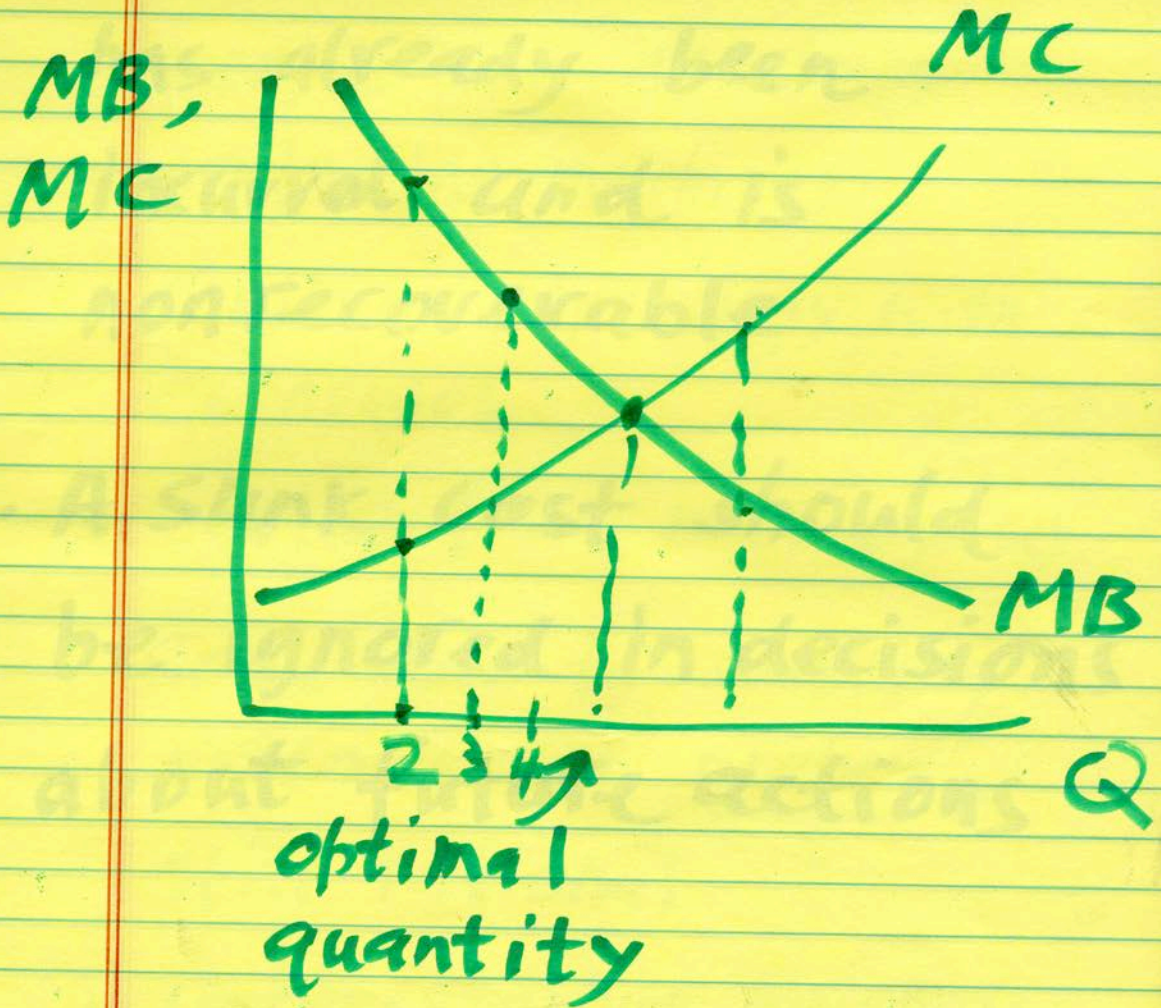
maximizing profit (MB)

For some activities,
marginal benefit constant

For now focus on
marginal benefit decreasing

Profit-maximizing
principle of marginal
analysis: when making a
profit maximizing 'how much'
decision, optimal quantity
is the largest quantity
at which $MB \geq MC$

Graphically



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Sunk cost : cost that has already been incurred and is nonrecoverable

• A sunk cost should be ignored in decisions about future actions

Concerns about Fairness
Bounded Rationality
Risk Aversion

Behavioral Economics

- people not economic computing machines
- combine psychology with economics
- Deviate from best choice
- Some due to wanting outcomes we prefer, still rational
- Concerns about Fairness
- Bounded Rationality
- Risk Aversion

BEHAVIORAL ECONOMICS

- Some may be irrational
- Typically stems from 6 mistakes
 - Misperceiving opp costs
 - e.g. counting sunk costs
 - Overconfidence
 - not meeting deadlines
 - not saving enough
 - Unrealistic Expectations about future Behavior
 - tomorrow will give up ice cream

- Counting \$ Unequally

- credit card use

- Loss aversion

- feel misery of losing \$100 twice as much as pleasure of gaining \$100

- Status Quo Bias

- enrollment in 401(k)

- opt out - more enroll

Why use rational model?

- still good predictions in most markets

P of fertilizers ↑
use less by farmers

- market competition discipline
- search for predictable irrational behavior
- benchmark case