

Output	Inputs	Input Cost	Total Cost
0	0	→ 1 → 0	→ 0 → 0
1	1	→ 1 → 1	→ 1 → 1
2	2	→ 2 → 2	→ 2 → 2
3	3	→ 3 → 3	→ 3 → 3
4	4	→ 4 → 4	→ 4 → 4

Price = MC

⇒ Marginal Benefit ⇒ Marginal Cost

→ Firm

Total Revenue =  $P^* \times Q^*$

Marginal Revenue

= Additional revenue rec'd by selling an additional

↳ As Q increases by 1 unit, what is the marginal revenue

↳  $MR = Price$

Theorem: The optimal point total profit is where  $MR = MC$

So,  $P = MC$ .

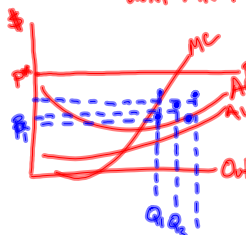
But why?

→ Is it good if  $MC < MR$

↳ A firm would like to make more money.

→ Is it good if  $MR < MC$

↳ Would make more money you should continue until  $MR = MC$



Consumer Theory (creating curve)

- Supply curves depend on productivity & costs.

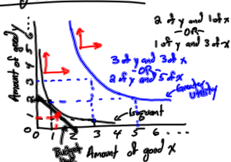
- Utility (happiness)  
↳ Jeremy Bentham  
↳ John Stuart Mill

- Utility Function

↳ Total utility (happi) for each amount co

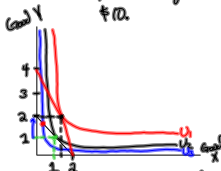
Utility

Indifferent Curves

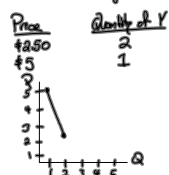


How much to consume?  
 - Depends on utility and budget.

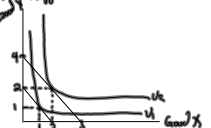
- ↳ Indifferent  $\hat{=}$  budget line
- ↳ What if the price of good X is \$5 and the price of good Y is \$5?
- ↳ With a budget of \$10.



But what if the price of good Y changes?  
 Now \$5  
 Now \$2.50  
 Budget is still \$10.

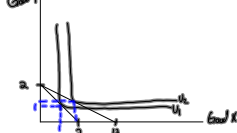


What happens if income increases?



Assume  $P_x = \$5, P_y = \$5$  Budget is now \$20

Price of other goods

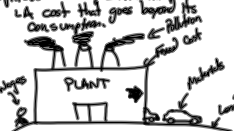


Suppose Budget = \$10,  $P_y = \$5$ , but  $P_x$  is now \$2.50.  
 ↳  $Q_x \uparrow, Q_y \uparrow$

Supply Curve

↳  $MC \geq AVC$  (if  $MC < AVC$ , then  $MC < ATC$ )  
 ↳  $\Delta Total Cost / \Delta Output$  (if  $MC < ATC$ , then  $MC < ATC$ )  
 ↳  $FC$  (Fixed Cost)  
 ↳  $VC$  (Variable Cost)

Spillover costs/Externality



Pigou Tax

↳ Pigou tax  
 ↳ Tax consumption or production by the amount of spillover costs generated.  
 ↳ The tax would increase price, therefore, reduce quantity.

