

Note on Rational Choice (for chapter 1)

Rational Choice Rule

Objective: **Max NB** (net benefit) = B (benefit) - C (cost)

(a) $MB > MC \rightarrow Q \uparrow \rightarrow NB \uparrow$.

(b) $MB < MC \rightarrow Q \downarrow \rightarrow NB \uparrow$.

(c) $MB = MC \rightarrow Q^* \rightarrow \text{Max NB}$.

The Maximum NB rule: People pick a choice at a point where MB (marginal benefit) = MC (marginal cost).

Example:

Q = bottles of wine. P = price of wine. Assume that P = 2.

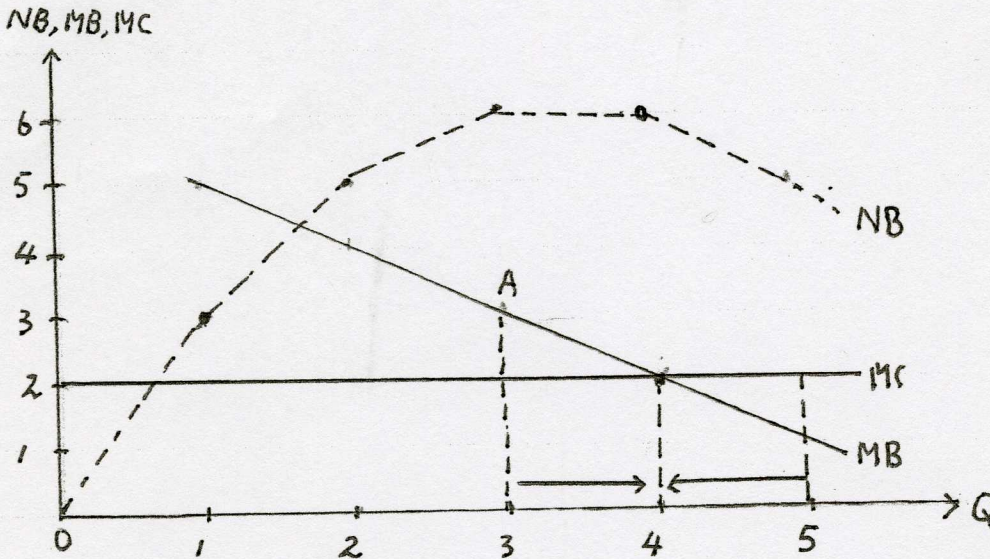
(1) Q	(2) ΔQ	(3) B	(4) ΔB	(5) $MB = \Delta B / \Delta Q$	(6) C	(7) ΔC	(8) $MC = \Delta C / \Delta Q$	(9) = (3)-(6) NB = B - C
0		0			0			0
1	1	5	5	5=5/1	2	2	2=2/1	3 = 5-2
2	1	9	4	4=4/1	4	2	2=2/1	5 = 9-4
3	1	12	3	3=3/1	6	2	2=2/1	6 = 12-6
4	1	14	2	2=2/1	8	2	2=2/1	* 6 = 14-8
5	1	15	1	1=1/1	10	2	2=2/1	5 = 15-10

(a) $MB = 5 > MC = 2 \rightarrow Q \uparrow \rightarrow NB \uparrow$ (NB = 5 > NB = 3)

(b) $MB = 1 < MC = 2 \rightarrow Q \downarrow \rightarrow NB \downarrow$ (NB = 6 > NB = 5).

(c) $MB = 2 = MC = 2 \rightarrow Q^* = 4 \rightarrow \text{Max NB} = 6$.

Graph:



Rational
Choice Rule

Making a Rational Choice [Bade and Parkin (2013, p. 11)]:

So, will you go to the movies for that third time in a week? If the **marginal cost of the movie** is less than the **marginal benefit from it**, your rational choice will be to see the third movie. If the **marginal cost exceeds the marginal benefit**, your rational choice will be to spend the evening studying. **As long as the marginal benefit from something exceeds or equals its marginal cost, our choice is rational and our scarce resources are used to make us as well off as possible.**