Laxmi Narain Dubey College, Motihari

(a constituent unit of B.R.A. Bihar University, Muz.)

NAAC Accredited ‘B+’

Department of Economics

Topic: Budget Line Anlaysis

Paper-I: MICROECONOMICS

Part-I

B.A. (Hons.)

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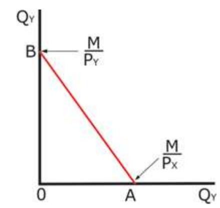
Budget Line

- ✓ A consumer aims at maximising his utility by reaching the highest indifference curve that he can achieve.
- ✓ However, the level of the indifference curve that he can achieve depends on his monetary income and the prices of the goods.
- ✓ The budget line represents the various combinations of the amounts of the goods, which the consumer can purchase given his money income and the price of the goods.
- ✓ It is also called the consumption possibility line or the price line.
- ✓ Assuming that there are only two goods, x and y, under consideration, the budget line can be expressed as



$$M = P_xQ_x + P_yQ_y$$

where M is consumer's money income, P_x is per unit price of good x, Q_x is quantity of good x, P_y is per unit price of good y, and Q_y is quantity of good y.

Consumption Baskets and the Budget Line			
Consumption Basket	Qx	Qy	Total Spending
A	0	40	Rs. 50
B	20	30	Rs. 50
D	40	20	Rs. 50
E	60	10	Rs. 50
G	80	0	Rs. 50

Suppose, M=Rs. 50, P_x=Rs. 10, P_y=Rs. 5

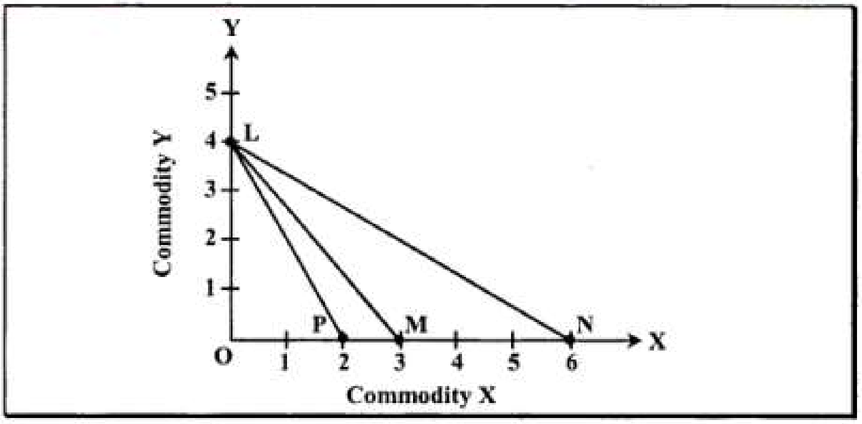
- ✓ In this figure, the slope of the budget line is the price ratio of the two goods. Here AB depicts the budget line of the consumer, as a straight line intersecting the X-axis and the Y-axis at points A and B, respectively.
- ✓ We can determine the intersection of the budget line,
  - ➢ On the x axis (Point A) **:** Since Q_y is equal to zero, $Q_x = M/P_x$
  - ➢ On the y axis (Point B) **:** Since Q_x is equal to zero, $Q_y = M/P_y$
- ✓ Slope of the budget line,

$$AB = - OB/OA = - M/P_y \;/\; M/P_x = - P_x/P_y$$

- ✓ The slope of the budget line is the price ratio of the two goods.
- ✓ The budget set is the right angled triangle BOA, which is formed by the budget line.
- ✓ Since the consumer's savings are assumed to be zero, the consumer will spend all his income on goods x and y and he will choose a combination of x and y on the budget line.

Swing in Budget line

Other things remaining the same, when price of the particular commodity changes, budget line will swing upward or downward. If price of the commodity decreases, purchasing capacity of consumer increases, which causes the upward swing in price line. Similarly, when price increases purchasing capacity of a consumer decreases, which cause downward swing in price line. It is clear from the following figure.

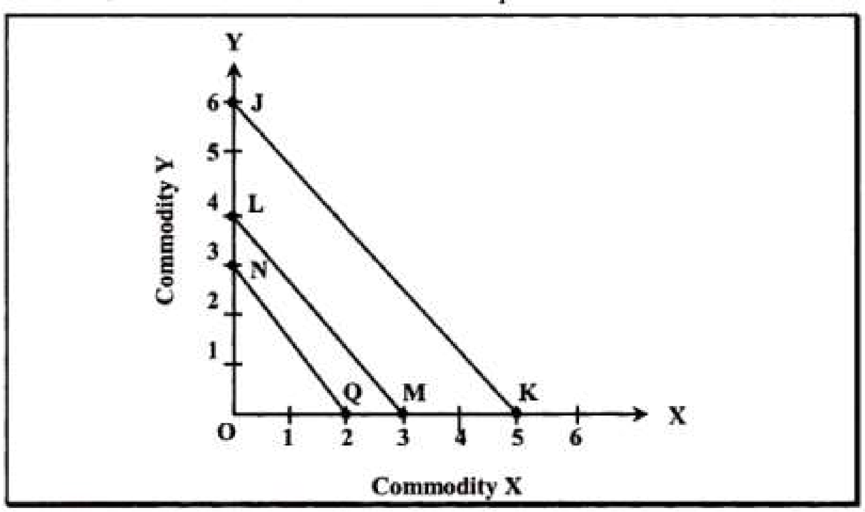


Here, the total budget of the consumer is Rs. 50 where price of 'X' commodity is Re. 1 and price of 'Y' commodity is Rs. 5. In the Figure LM is the initial budget line where consumer allocates his total budget Rs. 50 into X and Y commodity consuming 3 unit of X commodity (Rs. 30) and 4 units of Y commodity (Rs. 20). Suppose price of 'X' commodity decrease3 from Rs. 10 to Rs. 6, consumer can increase the consumption OX X commodity from 3 units to 6 units without reducing Y commodity which cause upward swing in budget line that is 'LN'.

Similarly, if price of X commodity increase from 10 to 15, consumers only can consume 2 units of X commodity and 6 units of Y commodity which cause downward swing in budget line to LP.

Shifts in Budget line

Other things remaining the same, when income of consumer changes, there is shift in budget or price line. When income increases, budget line shifts rightward, where consumer can consume more units of both X and Y commodity. On the other hand, if income decreases, consumption level decreases, which causes to down ward shift in price line.



Similarly when consumer's income decrease to 40 then price line shift downward to NQ where consumer only can consume 2 units of X commodity (Rs. 20) and 3 units of Y commodity (Rs. 30). In this way change in consumer's income shift the budget line upward or downward where price is constraint.