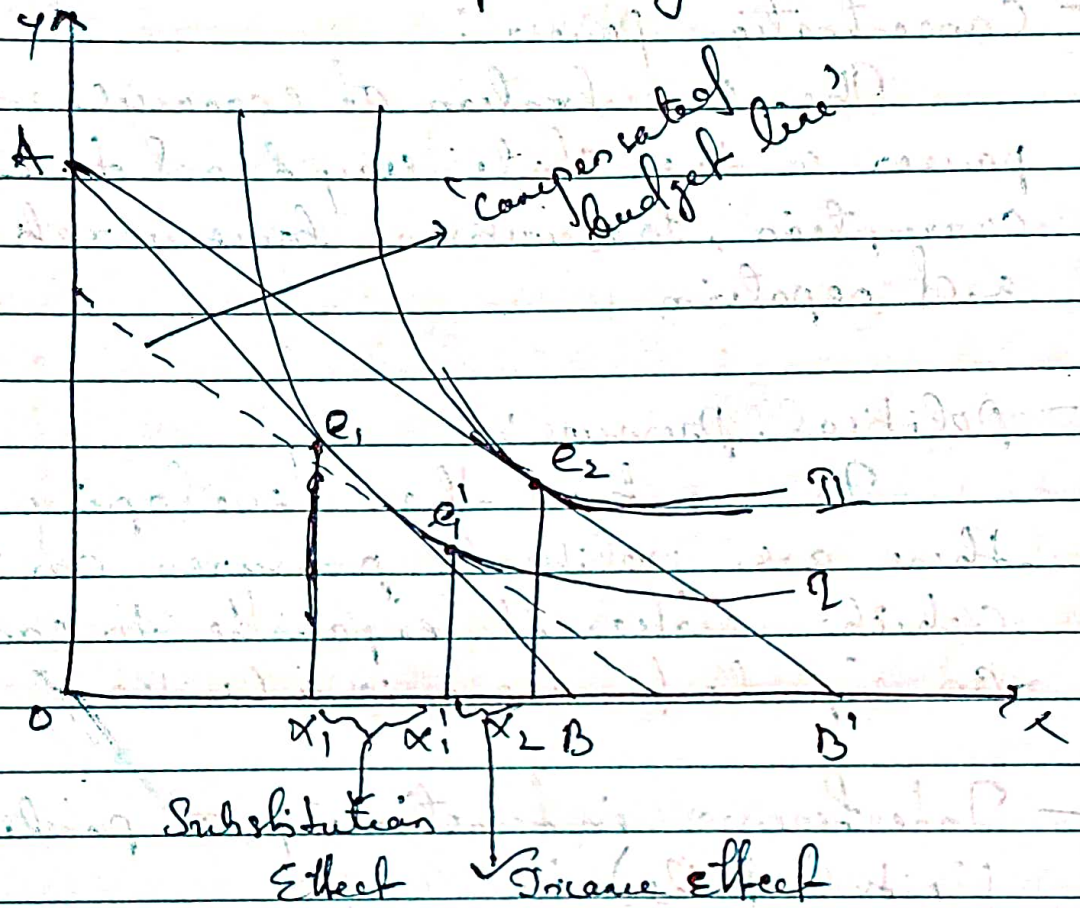
Slutsky's Theorem:

In the indifference curve approach the law of demand is derived from the Slutsky's theorem, which states that the substitution effect of a price change is always negative i.e if the price increases the quantity demanded decreases and vice versa.

The total price effect can be split into two separate effects (a) Substitution effect.

(b) Income effect.

Substitution Effect: The substitution effect is the increase in the quantity bought as the price of the commodity falls, after adjusting income so as to keep real purchasing power of the consumer as same before. This adjustment in income is called compensating variation.



Here, as price of x falls the quantity demanded is increases from x_1 to x_2. This total change from x_1 to x_2 is known as price effect. The parallel shift of the budget line until it becomes tangent to the initial indifference curve is known compensated budget line. This allows the consumer to remain on the same level of satisfaction as before the price change.
The movement of consumer from e_1 to e_1' shows the substitution effect of price change: the consumer buys more of x now that it is

cheaper, substituting y for x. However, the compensating variation is a device which enables the isolation of substitution effect, but does not share the new equilibrium of the consumer. This is defined by point e_2 on the higher indifference curve II. The consumer has infact a higher purchasing power and if the commodity is normal, he will spend some of his increased real income on x, thus moving from x_1 to x_2. This is the income effect of the price change. The income effect of a price change is negative for normal goods and it reinforces the negative substitution effect.

→ The income effect is positive for normal goods: as income increases, more of x is demanded. Here, the income effect is negative because it relate the change in the purchasing power of money income to change in the price of x. ~~bought~~

If however, the commodity is inferior, the income effect of the price change will be positive: as the purchasing power increases, less of x will be bought. Still for most of the inferior goods the negative substitution effect will more than offset the positive income effect, so that the total price effect will be negative. Thus, the negative substitution effect is in most cases adequate for establishing the law of demand.

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