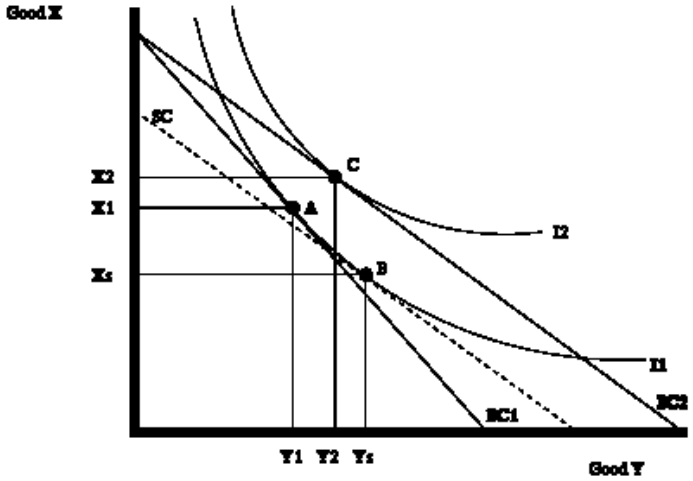
Every price change can be decomposed into an income effect and a substitution effect. The price effect is viewed as a combination (sum) of income and substitution effects. The substitution effect always works in one direction. A consumer is always induced to buy more units of a cheaper good. Income effect on the other hand could be positive, negative or zero in case of normal, inferior (including Giffen goods) or neutral goods respectively.

Therefore, the price effect, as the final outcome of the substitution and income effects, depends on their relative direction and magnitude. It can be summarized in the chart.

Impact of a fall in the price of good X				
Nature of Good X	**Substitution Effect** (Direction of Change)	**Income Effect** (Direction of Change)	**Substitution & Income Effects** (Magnitude of Change)	**Price Effect**
Normal Good	Increase in quantity demanded of Good X	Increase in quantity demanded of Good X	-	Positive
Inferior Good	Increase in quantity demanded of Good X	Decrease in quantity demanded of Good X	SE > IE	Positive
Giffen Good	Increase in quantity demanded of Good X	Decrease in quantity demanded of Good X	SE< IE	Negative

The substitution effect is a price change that alters the slope of the budget constraint but leaves the consumer on the same indifference curve. In other words, it illustrates the consumer's new consumption basket after the price change while being compensated as to allow the consumer to be as happy as he or she was previously. By this effect, the consumer is posited to substitute toward the good that becomes comparatively less expensive. In the illustration below this corresponds to an imaginary budget constraint denoted SC being tangent to the indifference curve I1.

If the good in question is a normal good, then the income effect from the rise in purchasing power from a price fall reinforces the substitution effect. If the good is an inferior good, then the income effect will offset in some degree the substitution effect. If the income effect for an inferior good is sufficiently strong, the consumer will buy less of the good when it becomes less expensive, a Giffen good (commonly believed to be a rarity).



In the figure, the substitution effect, Δy_1^s, is the change in the amount demanded for y when the price of good y falls from p_1 to p_1' (increasing purchasing power for y) and, at the same time, the money income falls from m to m' to keep the consumer at the same level of utility on $I1$:

$$\Delta y_1^s = y_1(p_1', m') - y_1(p_1, m).$$

The substitution effect increases the amount demanded of good y from y_1 to y_s. In the example, the income effect of the price fall in y_1 partly offsets the substitution effect as the amount demanded of y goes from y_s to y_2. Thus, the price effect is the algebraic sum of the substitution effect and the income effect.