Cross Price Elasticity Of Demand Formula

Cross price elasticity of demand is referred to as how responsive or elastic is the demand for one product with response to change in price of another product. In other words, cross price elasticity of demand is tracking the relationship between price and demand.

By calculating gross price elasticity, it can be determined if the products are substitutes, complements or totally not related to each other.

In such a situation, if the products are substitutes of each other then positive cross elasticity of demand is observed while if the products are complements of each other then negative cross elasticity of demand.

Industries and business owners use this information for determining the price for certain products.

The cross price elasticity of demand formula is expressed as follows

Cross Price Elasticity of Demand (XED) = $(\Delta Q_X/Q_X) \div (\Delta P_Y/P_Y)$

Where,

Q_X = Quantity of product X

P_Y = Price of the product

Δ = Change in quantity demanded / price

From this formula it can be deduced that

If XED > 0 then the products are substitutes of each other.

XED < 0 then the products are complements of each other

XED = 0, products are not related to each other.