Demand Function: Definition

Demand function shows the functional relationship between Quantity demanded for a commodity and its various Determinants.

It can be divided in to

1. Individual Demand Function
2. Market Demand Function

Demand Function

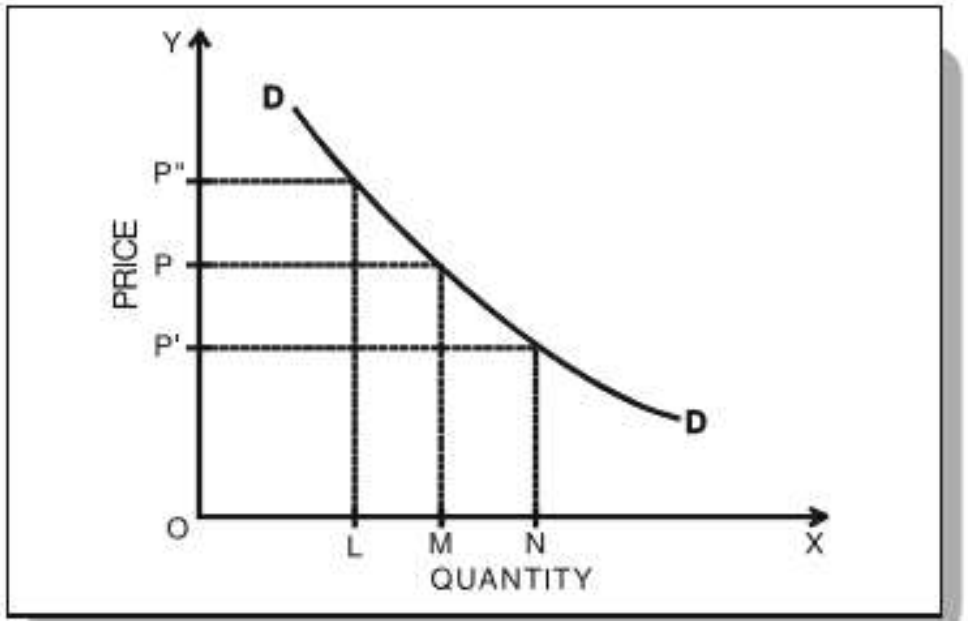
Individual Demand is a Function of:

Dx=f(Px, I, Pr, E, T)

1) Demand of Commodity x (Dx)
2) Function of commodity x (f)
3) Price of good or service *(Px)*
4) Incomes of consumers *(I)*
5) Prices of related goods & services *(P_R)*
6) Future Expectation of product *(E)*
7) Taste patterns of consumers (T)

Price of Commodity x

The quantity demanded is inversely related to price of the products, i.e., if prices fall, the demand will increase.

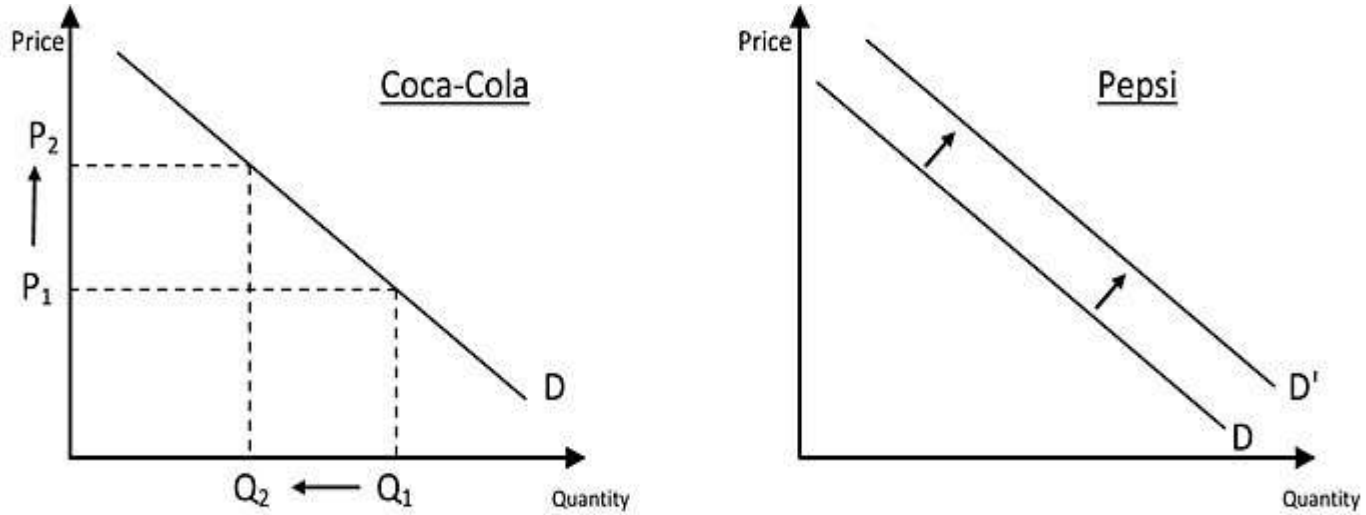


1/p

Related Goods Price

- Substitute Goods
- Complementary Goods

The quantity demanded is positively related to the price of substitute goods, i.e., if the price of substitute goods increases, the quantity demanded for product X will increase.

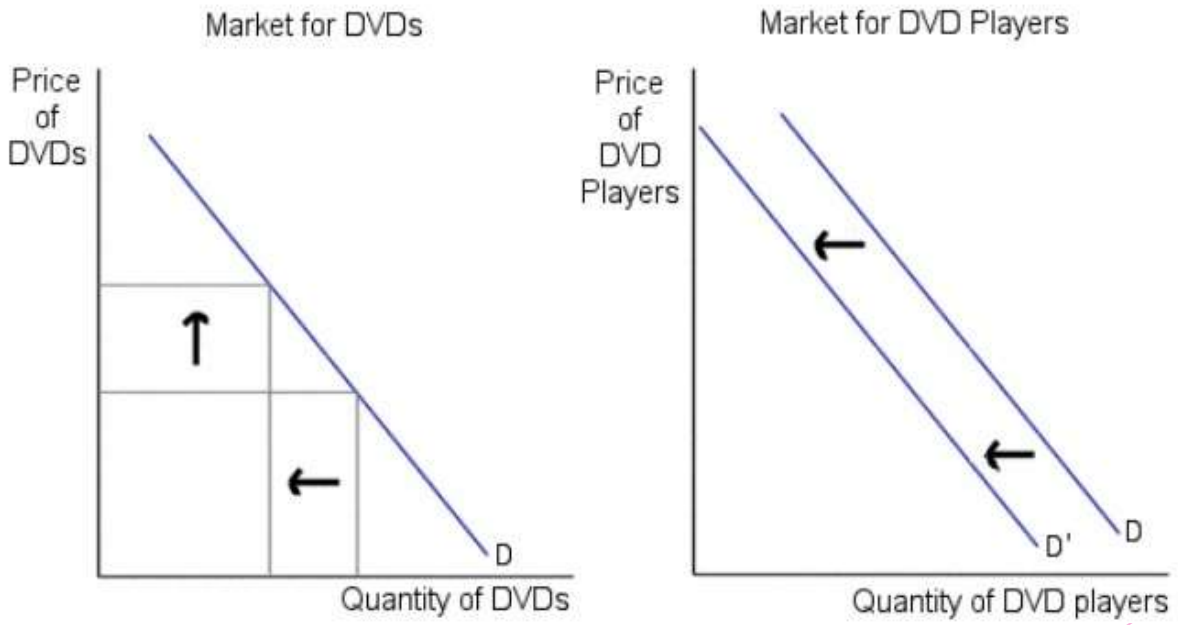


Suppose the price of Coca-Cola rises from P_1 to P_2 because one of the inputs rises in price. This would cause people to consume less Coca-Cola, decreasing the quantity sold from Q_1 to Q_2. For the substitute good Pepsi, the demand curve would shift out for all price levels from D to D', leading to more Pepsi being consumed.

Relative Goods Price

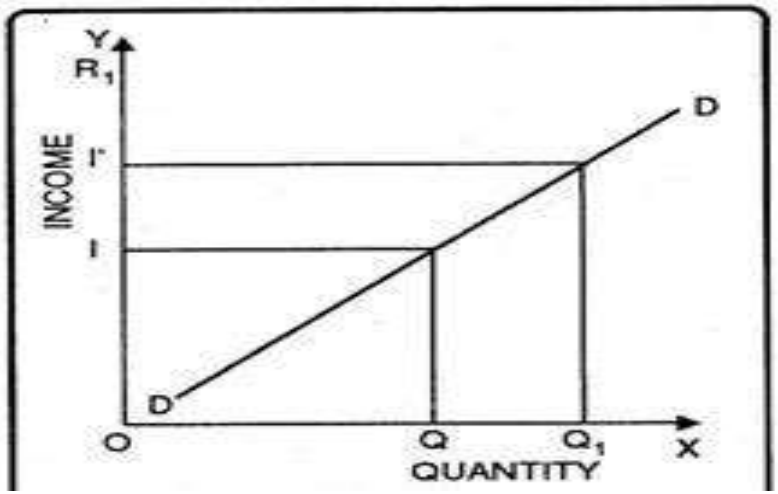
Complementary Goods

- As Price of commodity x increases , quantity demanded of complementary goods decreases. So effect is negative.



Income

- The quantity demanded is also positively related to the income of consumers, i.e., if the income is more, the quantity demanded will be more.



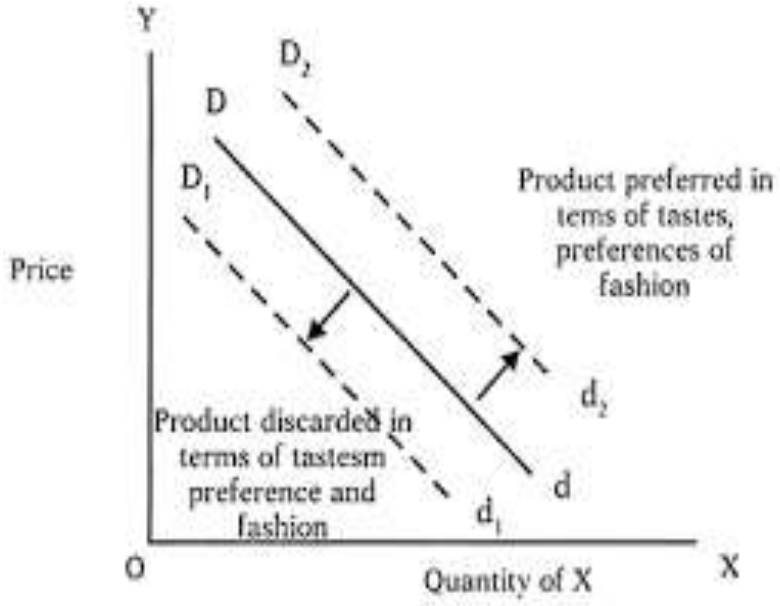
Expectation

If future expectation of buyer is that price will increase, demand increases that time and vice versa.

E.g.- Prices of Car

Taste & Preferences

A positive change in tastes or preferences increases demand (shifts it right/up). A negative change in tastes and preferences will decrease demand (shift it left/down).



Market Demand Function

Dx= f(Px, I, Pr, Pe, T, **N, DI, G**)

1) Demand of Commodity x (Dx)
2) Function of commodity x (f)
3) Price of good or service *(Px)*
4) Incomes of consumers *(I)*
5) Prices of related goods & services *(P_R)*
6) Expected future price of product *(P_e)*
7) Taste patterns of consumers (T)
8) Number of consumers in market (N)
9) Distribution of Income (DI)
10) Government Policy (G)

Population

It is directly or positively related. Higher population leads higher demand.

Population increase , D increase

Population decrease , D decrease

Distribution of Income

- Distribution of income equal , D increase

(reduction of gap between poor and rich)

- Distribution of income not equal , D decrease

(rich become more rich while poor become more poor)

Government Policy

Government policies like taxation & subsidies determines **demand** for various goods in the market. When the **government** increases the tax rate that leads to decrease the purchasing power of the consumer & **demand** for the commodities goes down in the market. Subsidies that is grants given by the **governments** to the firms may lead to increase in demand.

Thank you