## **Demand Function**

A demand function is a relationship between the amounts purchased of a good or service by consumers and independent variables on which that demand varies. A demand function explains and describes demand. It almost always includes the price of the good or service as one of the independent variables.

A common demand function looks something like this:

$$\begin{aligned} Q_d &= f(P,I,P_r) \\ Q_d &= Quantity\ demanded \\ P &= Price \\ I &= Income \\ P_r &= Price\ of\ competing\ goods \end{aligned}$$

This demand function says that the quantity demanded is a function of the price of the good or service, the income level of potential customers and the price of competing goods.

A typical demand function could be modeled with the following equation:

$$Q_d = a + bP + cI + dP_r$$

The small letters b, c, and d are called demand coefficients. They represent by how much the variable  $Q_d$  will change for each change unit change of a variable.