Start-Tech Academy

New Product Forecasting

New Product Forecasting

- New products require large research and development investments
- Therefore It is important to forecast future sales
- With little or no history about sales of a product, it is difficult to predict future product sales.

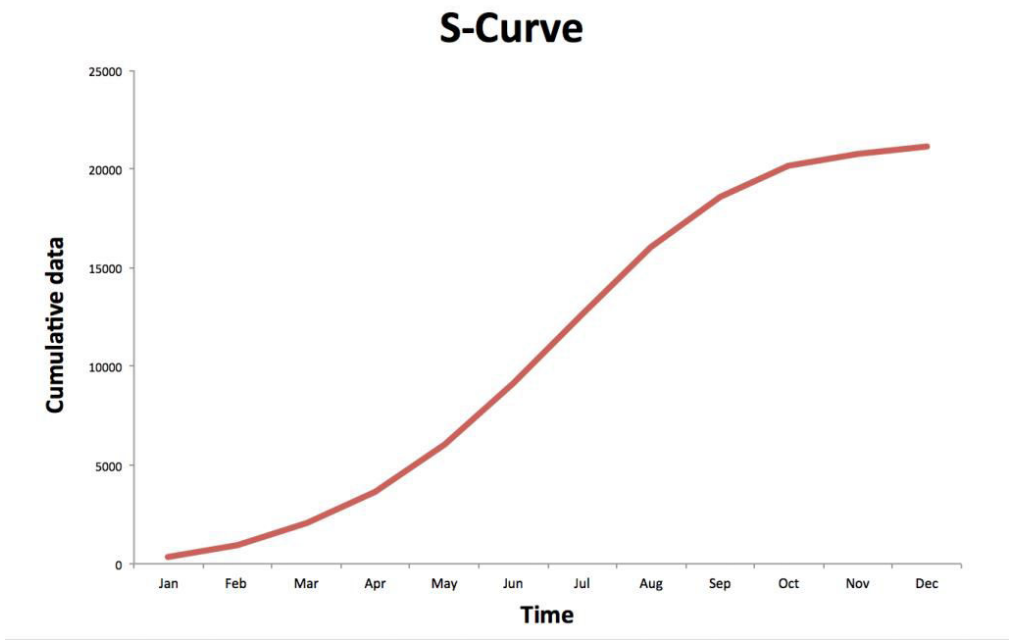
S Curve – New Product Forecasting

S Curve

- A graph of new product sales on the y-axis against time on the x-axis looks like the letter S and is often referred to as an S curve.
- If a product's sales follows an S curve, then up to a certain point (called an inflection point) sales increase at an increasing rate, and beyond the inflection point the growth of sales slows.
- The S curve equation enables you to know how large sales will eventually become and whether sales have passed the inflection point.

S Curve – New Product Forecasting

S Curve



In an S curve, there are 2 points of interest for a marketing analyst

1. The upper limit of sales
2. The inflection point: Defined as the time t when the rate at which sales increase begins to decrease.

S Curve – New Product Forecasting

Logistic / Pearl Curve

The Logistic curve is often used to model the path of product diffusion

$$x(t) = \frac{L}{1 + ae^{-bt}}$$

x(t) = sales per capita at time t, cumulative sales by time t, or percentage of population having used the product by time t

- If you model cumulative sales, then cumulative sales per capita approach an upper limit of L.
- If you model actual sales per capita, then actual sales per capita approach L.
- If you model percentage of population to have tried a product, then the final percentage of people to have tried a product will approach L.
- Our aim is to find values of L , a and b

S Curve – New Product Forecasting

Gompertz Curve

The Gompertz curve is

$$x(t) = ae^{-ce^{-bt}}$$

x(t) = sales per capita at time t, cumulative sales by time t, or percentage of population having used the product by time t

- Our aim is to find values of a, b and c

S Curve – New Product Forecasting

Gompertz Vs Pearl Curve

If the likelihood of future adoptions increases with the number of prior adoptions, use the Pearl curve to generate future forecasts. Otherwise, use the Gompertz curve to generate future forecasts.