

Rate of adoption.

The S-shaped growth curve that is commonly used to describe adoption is

$$P = K / [1 + \exp(-(a + b.t))]$$

where

P is the proportion of users who have adopted the technology at time t

K is the ultimate proportion of users who will have adopted it when the process is complete

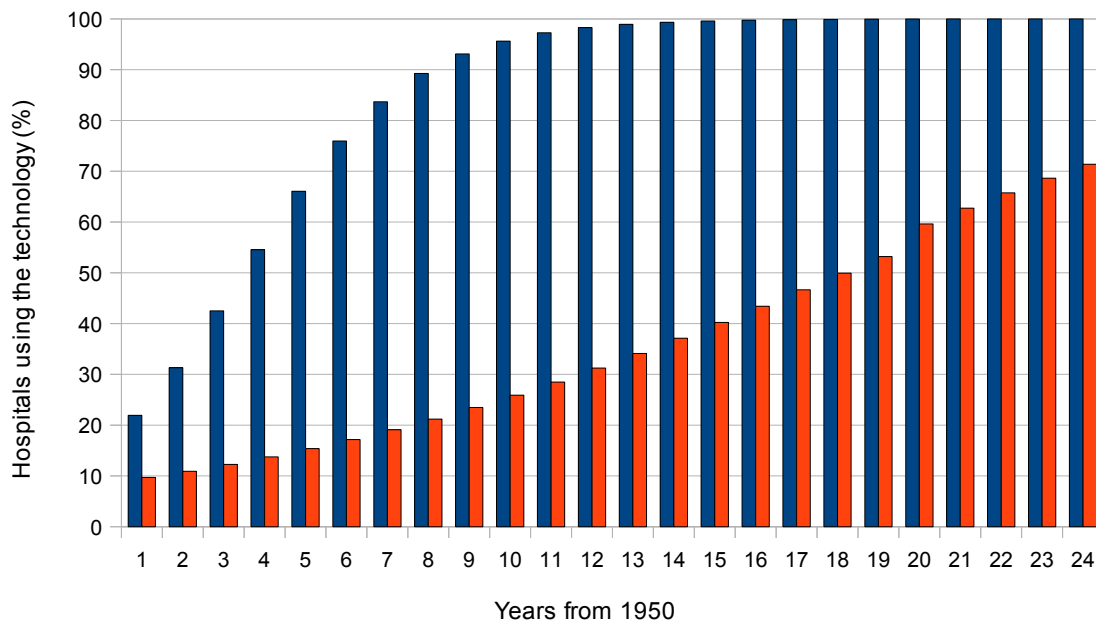
a is a constant (the time at which adoption begins)

b is a constant the rate of adoption)

If both sides of the equation are divided by $(K - P)$, then after taking logs

$$\ln[P / (K - P)] = a + b.t$$

That is, the log of the ratio of the number adopting to the number not adopting is a linear function of time. The coefficient b is the rate at which this log ratio changes with time, i.e. it is a measure of the speed of adoption.



Blue curve: early adoption and rapid diffusion

Red curve: later adoption and slower diffusion, i.e. smaller a and smaller b