

This is a non-linear regression model. It depends on two variables, x and y .
 The dependent variable y is measured in miles, which is a continuous variable.
 The independent variables are x_1 (age), x_2 (income), and x_3 (years of experience).
 The error term ϵ is the difference between the observed value and the predicted value.
 The error term ϵ follows a normal distribution with mean zero and standard deviation σ .

$$(1) \quad S(x, \sigma) = B(x, \sigma) + C(x, \sigma)$$

The error term ϵ is assumed to be normally distributed with mean zero and standard deviation σ .
 The error term ϵ is assumed to be uncorrelated with the independent variables.

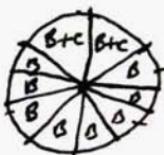
The error term ϵ is assumed to be homoscedastic, meaning that the variance of the error term is constant across all values of the independent variables.

in that (a) it makes no room for parasites ("free-loaders"), and (b) it encourages inventors to work above the basic needs.

However, formula (1) could lead to extreme individualism: see Fig. (a).



Fig. (a)



(b)

Fig. 1. Two divisions of the total production: (a) such radical meritocracy involves large inequalities. (b) Moderate meritocracy involves bounded inequalities.

We must therefore supplement (1) with a restriction on the amount of power to be assigned for extraordinary service, e.g.

$$S = B \quad ((x, \sigma) = 2 B(x, \sigma)).$$