

Table 5.1 Nonlinear relations that can be reduced to linear form.

Original relation	Transformation and linear relation, $\bar{y} = c\bar{x} + d$
1. $y = ax^b$	$\ln y = \ln a + b \ln x$ $\bar{y} = \ln y, \bar{x} = \ln x, c = b, d = \ln a$
2. $y = ae^{bx}$	$\ln y = \ln a + bx$ $\bar{y} = \ln y, \bar{x} = x, c = b, d = \ln a$
3. $y = \frac{ax}{b+x}$	$\frac{1}{y} = \frac{b+x}{ax}$ $\bar{y} = \frac{1}{y}, \bar{x} = \frac{1}{x}, c = \frac{b}{a}, d = \frac{1}{a}$
4. $y = \frac{a}{b+x}$	$\frac{1}{y} = \frac{b+x}{a}$ $\bar{y} = \frac{1}{y}, \bar{x} = x, c = \frac{1}{a}, d = \frac{b}{a}$
5. $y = a_0 x_1^{a_1} x_2^{a_2} \dots x_m^{a_m}$	$\ln y = \ln a_0 + a_1 \ln x_1 + \dots + a_m \ln x_m$ $\bar{y} = \ln y, \bar{c}_0 = \ln a_0, c_i = a_i, i = 1, 2, \dots, m, \bar{x}_i = \ln x_i, i = 1, 2, \dots, m$