Summary of Slope and Elasticity Formulas

Functional Form	Slope $\left(\frac{dY}{dX}\right)$	Elasticity $\left(\eta_{yx} = \frac{dY}{dX}\frac{X}{Y}\right)$
Linear: $Y = a + bX$	b	$b\frac{X}{Y}$
Double–log: $Y = e^{b_0}X^{b_1}$ $\Rightarrow \ell n\, L = b_0 + b_1 \ell n\, X$	$b_1 e^{b_0} X^{b_1 - 1}$ $= b_1 \frac{Y}{X}$	b_1
Semi–log: $Y = e^{(a_0 + a_1 X)}$ $\Rightarrow \ell n\, Y = a_0 + a_1 X$	$a_1 e^{(a_0 + a_1 X)}$ $= a_1 Y$	$a_1 X$
Reciprocal: $Y = c_0 + c_1\left(\frac{1}{X}\right)$	$\frac{-c_1}{X^2}$	$\frac{-c_1}{XY}$
Quadratic: $Y = d_0 + d_1 X + d_2 X^2$	$d_1 + 2d_2 X$	$(d_1 + 2d_2 X)\left(\frac{X}{Y}\right)$