

Model of law enforcement

$$\text{Cost} = \frac{1}{2}P^2$$

α mitigation of cost of crime when captured

$$\text{Cost of Punishment/unit} = \beta$$

\bar{x} = amount of crime

$$u = 1 - (1 - \alpha P)\bar{x} - \frac{1}{2}P^2 - P\bar{x}\beta$$

$$\frac{du}{dP} = \alpha\bar{x} - P - \bar{x}\beta = 0$$

$$P = \bar{x}(\alpha - \beta) \quad \alpha - \beta > 0$$

