

$$y^* = XB + u$$

$T \times 1$ $T \times k$ $k \times 1$ $T \times 1$

$$y = \begin{cases} 1 & y^* > 0 \\ 0 & \text{otherwise} \end{cases}$$

PROBIT

LOGIT

$$= \begin{cases} 1 & XB + u > 0 \\ 0 & \text{otherwise} \end{cases}$$

or

$$y = \max(0, y^*)$$

TOBIT

$$= \max(0, XB + u)$$