

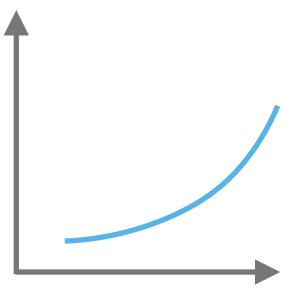
## •

 $Y \sim 1 + ln(X)$ 

Each 1% change in X is associated with a

 $(\beta_1/100)$ -unit change

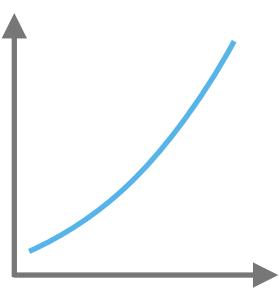
in Y, on average.



## **Exponential Growth**

$$ln(Y) \sim 1 + X$$

Each 1-unit change in X is associated with a  $|1-e^{\hat{\beta}_1}|$ % change in Y, on average.



## **Proportional Growth**

$$ln(Y) \sim 1 + ln(X)$$

Each 1% change in X is associated with a  $|1-e^{\beta 1/100}|$ % change in Y, on average.