

$$b = \beta + (x'x)^{-1} x' \varepsilon$$

$$E(b) = E\left[\beta + (x'x)^{-1} x' \varepsilon\right]$$

$$E(b) = E(\beta) + E\left[(x'x)^{-1} x' \varepsilon\right]$$

$$E(b) = \beta + \underbrace{(x'x)^{-1} x' E(\varepsilon)}_{0} \Rightarrow E(b) = \beta$$

$$E(\varepsilon | x) = 0$$

$$E_x[E(\varepsilon | x)] = E(\varepsilon) \Rightarrow \boxed{E(\varepsilon) = 0}$$

$$E(x' \varepsilon) = E_x[E(x' \varepsilon | x)] = E_x \underbrace{\left[ x' E(\varepsilon | x) \right]}_0 = 0$$

$$\text{cov}(x, \varepsilon) = \underbrace{E(x' \varepsilon)}_0 - \underbrace{E(x)}_0 \underbrace{E(\varepsilon)}_0 = 0$$

$$\text{Experiencia} = \text{age} - (\text{educ} + 6)$$