**Intro to Econometrics**

* LIE(Law of Iterated Expectations)
  + E[E(Y|X)] = E(Y)
  + E(Y|X) = 0 🡪 E(Y) = 0
* **Independence**
  + P(Y=y|X=x) = P(Y=y)
  + P(X=x|Y=y) = P(X=x)
  + X and Y are independent
* **Covariance of X and Y**
  + Cov(X,Y) = E[(X-ux) (Y-uy)]
* Independent 🡪 uncorrelated **BUT** uncorrelated ≠independent