

Our title

Team XY

18th of November 2020

# Our Question

- ▶ Introduction of the data
  - ▶ Outcome variable:
  - ▶ Explanatory variable:
  - ▶ Potential data cleaning (1-2 bullet points)

Our question is: “HERE COMES YOUR RESEARCH QUESTION!”

## Pattern of association - show your favorite model



## Model results

	Linear	Quadratic	P.L.S	WOLS
Intercept	59.23*** (0.76)	58.93*** (1.15)	58.97*** (0.80)	58.82*** (1.54)
ln(GDP/capita)	5.37*** (0.25)	5.72*** (0.99)		5.72*** (0.60)
ln(GDP/capita) <sup>2</sup>		-0.08 (0.20)		
ln(GDP/capita ≤ 50)			5.51*** (0.28)	
ln(GDP/capita > 50)			2.37* (1.16)	
R <sup>2</sup>	0.70	0.70	0.71	0.69
Num. obs.	177	177	177	177

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

Table 1: Life expectancy and ln of GDP per capita models

# Test and Residuals

- ▶ We are interested in  $H_0 : \beta = 0$ ,  $H_A : \beta \neq 0$  or not in our model.
  - ▶ The estimated t-statistics is 21.8, with p-value:  $9.1395775 \times 10^{-52}$ .
  - ▶ Thus we reject the  $H_0$ , which means the life expectancy is not uncorrelated with GDP per capita. (OR you can interpret differently. . . )
- ▶ We investigated the residuals:
  - ▶ The largest negative deviance from the predicted value is found in Equatorial Guinea with predicted life expectancy of 75.4, but the real value is only 58.4.
  - ▶ The largest positive deviance from the predicted value is found in Solomon Islands with predicted life expectancy of 63.9, but the real value is 72.8.

## +1 Prediction

- ▶ What you predicted?
  - ▶ Statistical inference:
    - ▶ CI of your predicted value
    - ▶ PI of your predicted value
  - ▶ External validity
    - ▶ What do you think? Would you trust your prediction?  
Time/Space/Group?

# Conclusion

- ▶ We investigated ...
- ▶ and we have found
  - ▶ X and Y are ... correlated
- ▶ Our analysis can be
  - ▶ strengthened by...
  - ▶ weakened by...