Math Camp 2015

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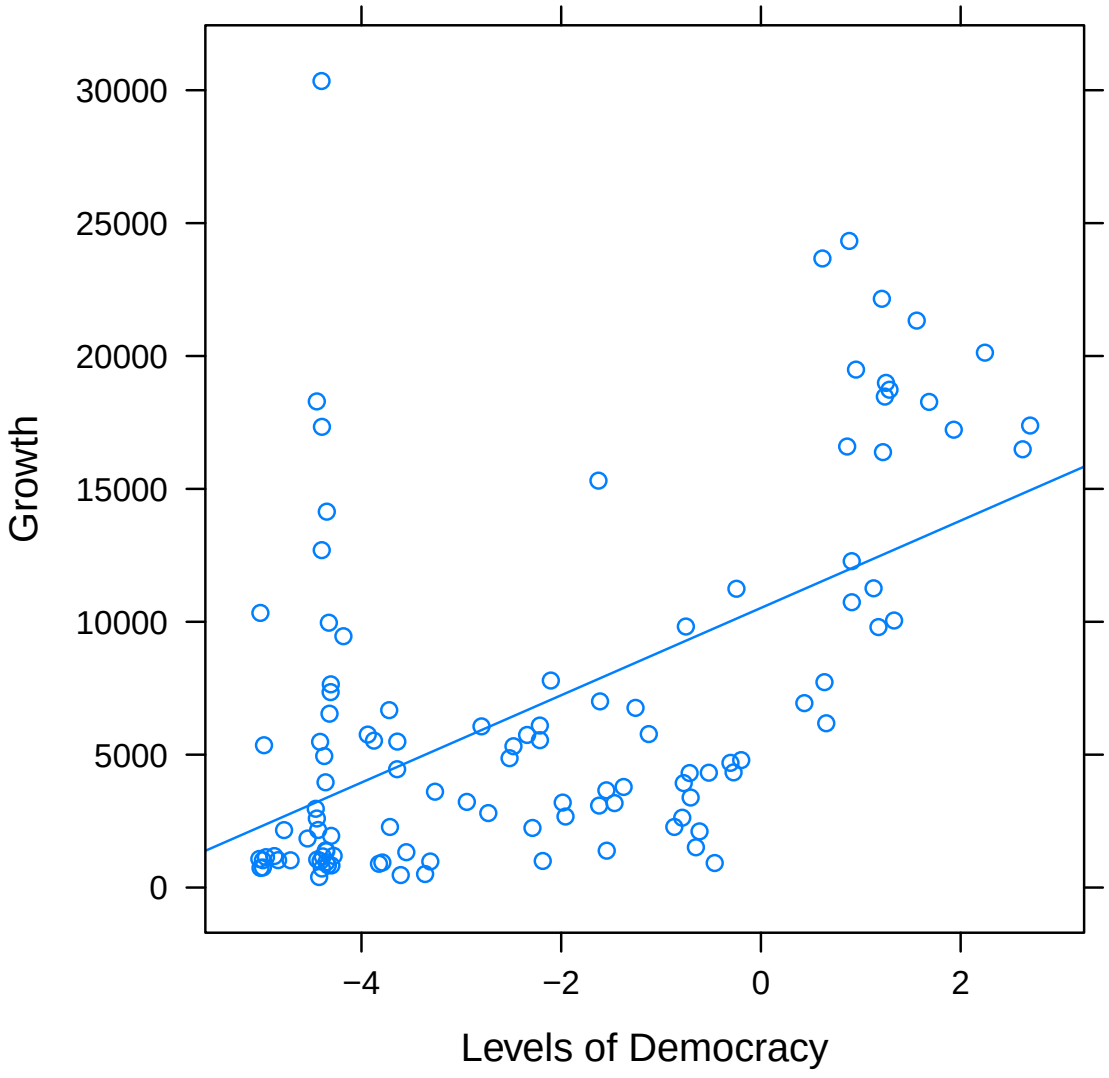
- Problem set: at the end of each day, due the next morning. Pen and pencil, but some answers are required in LaTeX

Introduction

- Name
- Why are you taking this course?
- What's your experience with previous methods courses?

Ultimate Goal: OLS



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- I just estimated a bivariate relationship, i.e. one Y and one X

Re-expression of our bivariate relationship: Regression Notation

- $\boldsymbol{Y}\text{GROWTH}_i = \beta_0 + \beta_1 \text{DEMOCRACY}_i + \epsilon_i$

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  $\beta_0 + \beta_1 \text{DEMOCRACY} + \beta_2 ? + \beta_3 ? + \beta_4 ? + \beta_5 ? + \beta_6 ? + \epsilon_i$
  What other covariates you think might explain GROWTH?

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  What other covariates you think might explain GROWTH?
- After so many covariates: it becomes annoying, right? We need a language to re-write the same thing but more simple
- That language is called **matrix alegebra**

Re-expression of our bivariate relationship: Matrix Notation

$$\boldsymbol{Y} = \boldsymbol{X}\beta + \epsilon$$