Pandas and Statsmodels

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Econ 126: Computational Macroeconomics

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- A total factor productivity or TFP



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 - Y measured by (real) GDP
 - K: inferred from investment and depreciation data
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 - h: typically measured as average years of education
- Of course macroeconomic measurement is subject to measurement error.



$$A = \frac{Y}{K^{\alpha} (hL)^{1-\alpha}} \tag{2}$$

• The production function *implies* a value for A:

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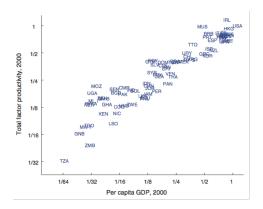


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 - · Quality of economic and political institutions
 - Degree of technology adoption
 - Public health



Figure 1: **TFP and GDP per capita across countries.** All values relative to the US. Source: Jones and Romer (2010)



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- Workers in lower-income countries use what human and physical capital the do have less efficiently than workers in higher-income countries.
- Since TFP isn't directly observable, we still don't know exactly why.



References

Jones, Charles I. and Paul M. Romer, "The New Kaldor Facts: Ideas, Institutions, Population, and Human Capital," *American Economic Journal: Macroeconomics*, 2010, 2 (1), 224–45.