Advance gravity Modelling

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Traditional problems

- **Correlation**
  (eg. Most of the papers studying the impact of institutions, democracy and other variables correlated with GDPpc)

- **Endogeneity problems**
  (eg. Mode 4 paper)
Soultions

- For the correlation: you would require **more information**

- For endogeneity use a system of simulataneous equations/ IV estimation (see Jansen and Piermartini, 2005)

STATA allows to do this trough **reg3** or **ivreg** command
Emerging issues

- **Zero** trade flows
- **Asymmetric** trade flows
- The **extensive margin** of trade: more countries trade over time
The incidence of zero trade
Trade growth in the extensive margin
Problems and solution?


- Solutions: 2 stage estimation
  1. Probit on the likelihood that 2 countries trade
  2. Introduce the estimated Mills Ratio to control for sample selection bias.