

Class conflict

- Alesina-Rodrik, Persson-Tabellini:
Inequality increases redistribution,
redistribution reduces growth through
incentive effects.
- Run a country regression with inequality

$$(y_{it+a} - y_{it})/a = \alpha y_{it} + X_{it}\beta + \gamma g_{it} + v_i + \epsilon_{it}$$

over long periods of data.

- Negative correlation between beginning of
period inequality and long-run growth.

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Criticism

- Benabou (1996): Inequality is slightly negatively correlated with redistribution in the cross-country data. And redistribution seems to be positively correlated with it.
- Panel Data Evidence: Deininger and Squire panel data set on inequality (available on the world Bank Web Site). Forbes (98), Li-Zou (98). Observe that level of inequality may well be correlated with countries' specific propensity to grow (the fixed effect). Estimate the same relationship with shorter lags

$$(y_{it+5} - y_{it})/5 = \alpha y_{it} + X_{it}\beta + \gamma g_{it} + v_i + \epsilon_{it}$$

- Want to use fixed effects. However, in the presence of a lagged endogenous regressor, fixed effect is biased. Use GMM estimator developed by Arellano and Bond (91).
- First difference the data:

$$(y_{it+a} - y_{it})/a = \frac{(a\alpha + 1)}{a}(y_{it} - y_{it-a}) + (X_{it} - X_{it-a})\beta + \gamma(g_{it} - g_{it-a}) + \epsilon_{it} - \epsilon_{it-a}$$

use y_{it-a} , X_{it-a} and g_{it-a} (and previous lags) as instruments for the differences.

- Find that when using fixed effects or Arellano and Bond, the relationship is *positive* and significant. Conclude that *increases in inequality increase growth*. Class conflict is not a problem.

POTENTIAL PROBLEMS

- This literature has commonly assumed a linear relationship between growth and observed levels of inequality. Barro (99) is a partial exception (interact inequality with wealth—w/o fixed effect. Finds that the negative relationship holds only in levels).
- There are reasons to think that the true relationship is not linear in levels
 - Theoretical reasons: Increases in inequality often come with conflict as do decreases in inequality. change may be bad (at least in the short run).
 - Measurement issues: Measurement error goes up during times of turmoil.

The evidence for misspecification

- Partially linear model:

$$(y_{it+a} - y_{it})/a = \frac{(a\alpha + 1)}{a}(y_{it} - y_{it-a}) + (X_{it} - X_{it-a})\beta + \phi(g_{it} - g_{it-a}) + \epsilon_{it} - \epsilon_{it-a}$$

Kernel and series estimation of $\phi(\cdot)$

- Inverted U-curve. Robust to using other specifications.
- Non-linearity in existing models:

$$(y_{it+a} - y_{it})^* = y_{it+a} - y_{it} - (a\hat{\alpha} + 1)(y_{it} - y_{it-a}) - a(X_{it} - X_{it-a})$$

Estimate the relationship:

$(y_{it+a} - y_{it})^*/a = \phi(g_{it} - g_{it-a}) + v_{it}$. Once again inverted U-Curve.

- Is it all measurement error.

An attempt to get at this issue using micro data

- Banerjee, Mookherjee, Munshi, Ray,...Look at the effect of inequality on the efficiency of sugar cooperatives.
- Sugar coops buy sugar cane locally, extract juice and make sugar.
- The goal is to avoid a private monopoly. By law they are required to pay uniform prices to everybody and charge uniform entry fees.
- Cane growers maximize $pf(l) - wl \rightarrow pf'(l) = w$, where p is price paid to cane growers.
- With the normalization one unit of cane=one unit of sugar, the coop should maximize: $qf(l) - wl \rightarrow qf'(l) = w$. Optimum $q = p$.

- Class conflict arises because the group that controls the coop gets to use the profits and as a result wants to push prices down below the efficient level.
- The Coase theorem fails because of the equal payment rules, coordination problem.
- Two groups: Big and small farmers.
- When the population is quite homogeneous (all big or all small) it does not pay to distort, since you are hurting people in your own group.
- When the population is heterogeneous but one group controls, it pays to distort.
- Our hypothesis is that big farmers get much more out of the profits than small farmers and have stronger incentives to distort.
- Empirical predictions:
 - Price and capacity should be U-shaped in share of big farmers
 - The participation rates for big farmers should go in the opposite direction the price.