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Determinants of economic growth: China and Russia versus the rest of the world

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Motivation

- To provide a brief overview of the proximate causes of growth during the recent past
- Not a paper on long-term growth, but paper on growth in the 2000s, the intention is to get some handle on the issues

- Shorter data makes it possible to avoid effects of e.g. Russian crisis, but we still have plenty of cross-sectional variation
- In the literature direct growth comparisons of Russia and China rare

Broad outline of the themes

- In the past two decades research on the determinants of economic growth has exploded, partly driven by availability of large new data sets, Barro and Sala-i-Martin (2004) provide overview of the issues
- The agenda has been to explain a) persistent growth in per capita GDP in many countries and b) some countries' inability to catch up with richer countries
- We are interested in the determinants of economic growth in our sample of 125 countries, but at the same time we want to know whether 1) formerly socialist countries still display different growth trajectories and 2) whether China and Russia are different

China and Russia different?

- The current decade has seen both Russia and China grow rapidly, but factors underlying growth are probably very different
- Both countries have relatively high education levels, but currently fixed capital investment is much higher in China
- In Russia the recent growth has been supported by high raw material prices
- If we control for all the standard determinants of growth, are Russia and China still different?

Determinants of medium-term growth

- Theoretical and empirical literature offer us a long list of potential variables related to economic growth
- Investment (as share of GDP) increases a country's productive capacity and future output, structure of exports has been found to affect growth, corruption usually bad for growth, economic freedom good for growth
- Poorer countries should be able to grow faster, i.e. there should be some convergence in the per capita income

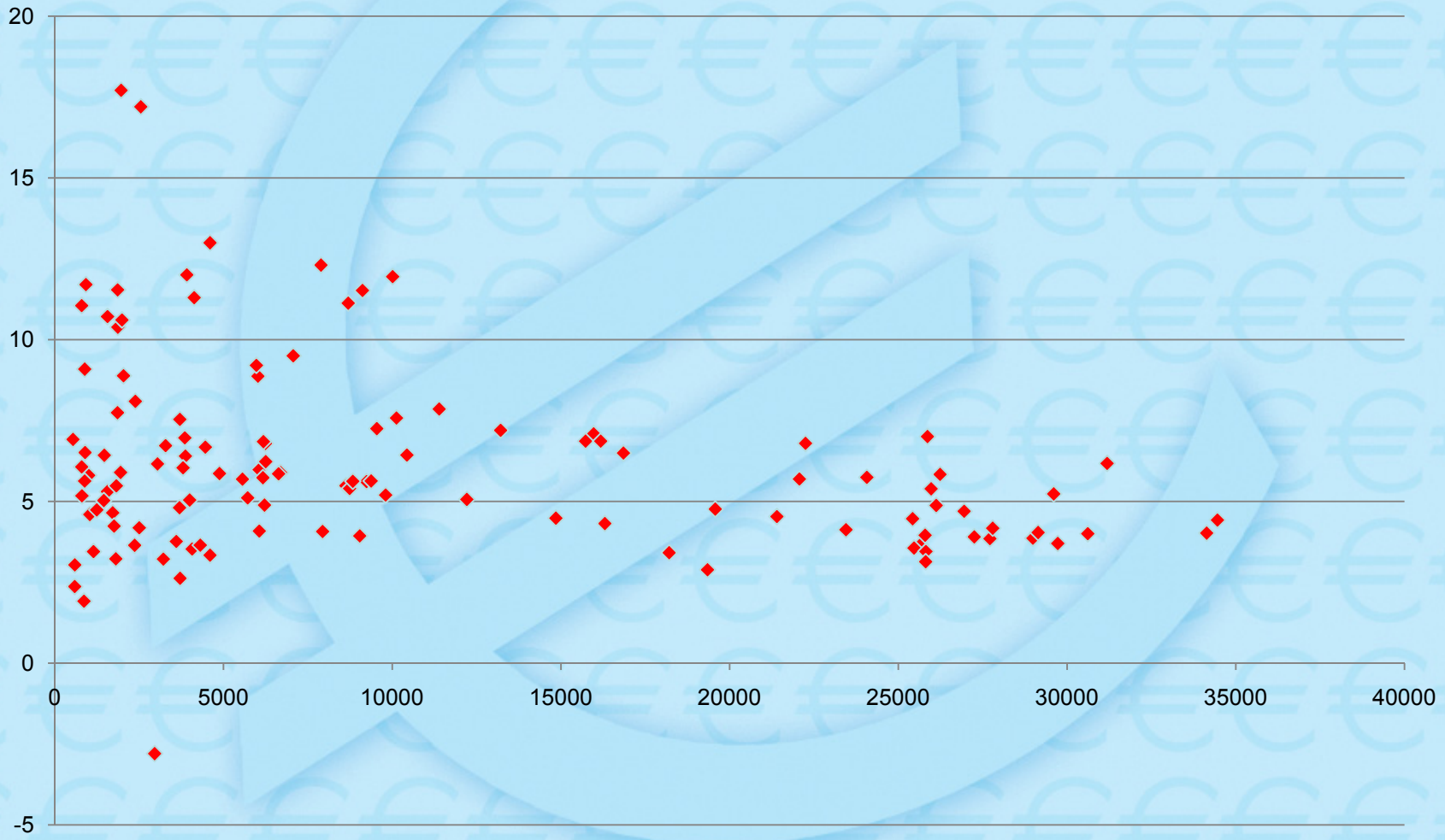
Empirical methodology

- Data from 125 countries, mostly average between 2000-2006
- Cross-section OLS, dependent variable average per capita GDP growth (we also use growth in 2005-2006 as robustness check)

Convergence we do find

C	10.54*** (5.41)
Ln(per capita GDP in 2000)	-0.51** (-2.29)
R^2	0.04

Cross-plot of initial per capita GDP and subsequent growth



Investment does lift growth

C	9.10*** (3.94)
ln (per capita GDP in 2000)	-0.73*** (-3.30)
Growth in labour force	-0.56*** (-3.29)
Gross investment (% of GDP)	0.18*** (4.41)
R^2	0.28

- China had the highest investment ratio (41%) in the sample
- Does capital accumulation explain China's high growth?

Resource curse? Or blessing?

C	7.66*** (3.25)
ln (per capita GDP in 2000)	-1.22*** (-4.55)
Growth in labour force	-0.91*** (-5.45)
Gross investment (% of GDP)	0.24*** (6.41)
Share of exports in GDP in 2000	0.01* (1.87)
Share of fuel exports in total exports	0.06*** (4.73)
Economic freedom	0.06* (1.73)
R^2	0.57

- This decade has been quite exceptional for raw material producers

Former transition countries are still special

C	3.51 (1.56)
ln (per capita GDP in 2000)	-0.86*** (-3.30)
Growth in labour force	-0.34* (-1.70)
Gross investment (% of GDP)	0.20*** (5.45)
Transition dummy	2.79*** (4.13)
Share of fuel exports in total exports	0.04*** (3.36)
Economic freedom	0.07** (2.57)
R^2	0.63

- After controlling for all these factors, do Russia or China still stand out?

There's something about China…

C	1.72 (0.92)
ln (per capita GDP in 2000)	-0.73*** (-3.09)
China	4.92** (2.34)
Gross investment (% of GDP)	0.16*** (4.15)
Transition dummy	3.74*** (7.24)
Share of fuel exports in total exports	0.04*** (3.19)
Economic freedom	0.09** (3.06)
R^2	0.64

Further results

- Corruption seems to enhance growth (”grease the wheels” hypothesis), possible non-linearities?
- Corruption may be endogenous to growth; we try to control for this by instrumenting corruption with ethnic, linguistic and religious fractionalizations as well as level of democracy and size of government consumption
- Positive effect of corruption on growth survives also when possible endogeneity is taken into account

Concluding remarks I

- We have identified factors correlated with economic growth in a large cross-section of countries
- Most predictions of neoclassical growth model are confirmed: Higher investment is associated with higher economic growth, as is economic freedom and (possibly) openness
- Convergence of per capita GDP does take place in our sample
- A decade after the start of economic transition, former socialist countries are growing faster, are they merely bouncing back from the transformational recession?

Concluding remarks II

- Even though dependence on fuel exports has been found to be detrimental for growth over long-term, in our relatively short sample fuel exporters have grown faster
- When all these factors are taken into account, Russia's growth does not seem exceptional
- However, for China this simple empirical exercise can not identify all the factors related growth
- This results underlies the exceptional nature of China's growth performance during the past decade

Future work

- Robustness checks

1. Different time periods
2. Different estimation techniques
3. Endogeneity
4. Possible other factors such as the role of finance