



Stylized facts in structural change in transition: discussant's remarks

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+ This is the research

- That we always say should be done more
- But is rarely done
- Careful application of standard methodology to a specific context, paying attention to the details of the environment
- In the Indian context, the question they focus on is do we see a change in the structural business cycle variables after 1991.
- The answer is yes: Our business cycle is becoming more and more like the OECD business cycle.
- Soon we will be able to say fun things like “double-dip recession”, debate whether the recession is U shaped or V shaped....



+ Specifically



- Output volatility has gone down slightly
- Investment is more pro-cyclical
- Imports are more pro-cyclical
- Exchange rate is more countercyclical
- Inflation is more predictable and more pro-cyclical
- Government expenditure is less volatile

+ On the other hand

- Output volatility is still high
- Consumption is not less volatile
- Government expenditure is less countercyclical





What is exactly the fact here?



- Depends on our theory of growth/business cycle. Assume, for example

$$\text{Log}y_{t+1} = a\text{Log}y_t + bg_t$$

Where g_t is a set of growth shocks with a positive mean

- This generates a positive relation between growth and volatility driven by differences in beta.
- Is India more volatile because it is growing faster?
- Should we scale volatility by growth?

+ However



- Negative correlation between volatility and growth (Ramey and Ramey)
- Suggests that what we suggested is not the right model.
- Of course it could be that growth increases volatility and volatility reduces growth..



A possible story



- Essentially links growth and volatility to the policy regime: this is view implicit in this paper
- Before 1991, positive productivity shocks could not be accommodated because of the closed economy: Generated inflationary pressures and the exchange rate worsened
- After 1991 the same shocks were permitted to generate growth. Investment and imports went up, but foreign investment flowed in and the exchange rate appreciated.
- Output volatility would have gone up but for imports.
- Consumption volatility remains high because mostly permanent productivity shocks (Aguillar-Gopinath)
- Are productivity shocks really that different?

+ A less optimistic view

- Productivity shocks get amplified by frictions
- Positive serial correlation through the cash-flow channel
- Negative serial correlation through the price of non-traded inputs
- For example as in Aghion-Bacchetta-Banerjee
- Excess output volatility as result of capacity underutilization
- Consumption volatility is driven by shocks to income that are larger or more persistent than they should be





The evidence



- Not much evidence that investment responds more to productivity shocks in economies with less good capital markets. If anything the reverse (Angeletos-Aghion-Banerjee-Manova)
- On the other hand the fraction of long-term investment in total investment is more pro-cyclical in economies with less good capital markets. If long-term investment is what enhances productivity, then a similar story to the one in the previous slide goes through.



Dependent variable:	Total investment / GDP			
	(1)	(2)	(3)	(4)
<i>investment / GDP</i>				
<i>priv credit</i>	3.43 (1.76)*	2.42 (1.05)	2.49 (1.13)	2.52 (1.13)
<i>priv credit*shock_t</i>	-0.18 (-0.60)	1.61 (1.10)	2.53 (1.52)	1.72 (1.21)
<i>priv credit*shock_{t-1}</i>	0.41 (3.57)***	2.54 (1.90)*	3.26 (2.45)**	1.82 (1.46)
<i>priv credit*shock_{t-2}</i>	-0.61 (-2.31)**	0.10 (0.05)	3.00 (1.61)	3.22 (1.54)
<i>comm share*shock_t</i>				-0.12 (-0.72)
<i>comm share*shock_{t-1}</i>				-0.20 (-3.92)***
<i>comm share*shock_{t-2}</i>				0.08 (0.86)
Controls:				
<i>shocks; income; country & year FE</i>	yes	yes	yes	yes
<i>income & rulelaw interactions</i>	no	no	yes	yes
<i>abs(shock)<=1</i>	no	yes	yes	yes



Dependent variable: Share of private structural investment in total private investment

Fin devt measure:	Private credit ₁₉₆₀₋₂₀₀₀			Liquid liabilities	
	(1)	(2)	(3)	(4)	(5)
<i>fin devt</i>				-0.054 (-0.93)	-0.053 (-0.91)
<i>fin devt*shock_t</i>	-0.012 (-2.89)***	-0.044 (-2.39)**	-0.066 (-2.27)**	-0.058 (-3.43)***	-0.089 (-3.11)***
<i>fin devt*shock_{t-1}</i>	0.003 (1.26)	-0.052 (-1.76)*	-0.052 (-1.58)	-0.062 (-3.10)***	-0.073 (-2.90)***
<i>fin devt*shock_{t-2}</i>	0.000 (-0.10)	-0.087 (-4.79)***	-0.113 (-4.89)***	-0.054 (-1.56)	-0.095 (-2.61)**
Controls:					
<i>shocks, income</i>	yes	yes	yes	yes	yes
<i>country & year FE</i>	yes	yes	yes	yes	yes
<i>income & rulelaw interactions</i>	no	no	yes	no	yes
<i>abs(shock)<=1</i>	no	yes	yes	yes	yes

+ One policy question

- How costly is this consumption volatility?
- We need to look at the sources of consumption variability in household data
- A lot of the consumption variation within the year is probably seasonal. Does not look like iid shocks
- Is it mostly additional “permanent” jobs created for people who are entering the higher productivity sector (dual economy view)?
 - If it is not anticipated, the welfare cost of the anticipation is probably quite limited
- The bigger cost is not the volatility but the underlying inefficiency.