Technological Diversification

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volatility in growth versus per capita gdp

- would expect volatility to go down as total gdp goes up - law of large number effect

- would expect volatility to go down as per capital gdp goes up - insurance is a superior good

top twenty wheat producers

- you might think the biggest in rich countries are much bigger than poor countries - again, could be law of large numbers

- what share of total output are the largest wheat producers in these different countries? if small why doesn't idiosyncratic risk average out?

volatility declines with per capita gdp at all levels of financial development

- this seems characteristic of all obvious theories

volatility versus private/credit per gdp decline in cross-section but not within a country

- but this doesn't seem to take account of per capital gdp which we already know is important and may be correlated differently with private credit per gdp over time and in the cross-section

- look at the multivariate regression - the sign does change when country specific fixed effects are included, but the non-fixed effect estimate -.07 plus one standard deviation .04 is -0.03, while the fixed effects estimate .01 minus one standard deviation of .05 is -.04 (but note the data is the same, so need to test the difference in coefficients)

at the firm level more productive = less volatile

- again size seems the obvious answer: more productive firms one would expect to grow faster, so be larger on average than less productive ones (plus learning by doing); larger firms we would expect to be less volatile

- don't regress volatility on sales per worker (-0.14) and employment (-0.20); regress it on total sales (-0.20) and sales per worker (-0.14 + 0.20 = +0.06) sign is positive not negative [can't recover standard error from data given in the paper]

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the model

- variation on off the shelf Grossman/Helpman model

- quite long, and not altogether easy to follow

- trying to figure out why only the failure rate γ matters and not the investment cost f, g.

the free parameter

- the key is that the only source of growth in the economy is the increase of varieties; the arrival rate is λ the departure rate is γ so $\lambda - \gamma$ has to be calibrated to the growth rate of the economy

- the obvious calibration starting point would be $\gamma = 0$

- obviously advantageous in calibrating to have a free parameter

- read discussion on p. 15 as to why the parameter γ should be introduced at all, found no rationale

- on p. 16 there is some discussion of the fact that historically some varieties have become obsolete – what on earth is the relevance of Pol Pot and Mao Zedong to the discussion of a market economy?

calibration

- for some arrival rates of failure get numbers similar to the data (would have been nice if this was in one table, rather than two tables dozens of pages apart)

- this explains too much in some sense: there was obviously something else going on in the data too

- how much does this help us understand the importance of product variety against other explanations? Not very much