Financial Integration and Business Cycle Syncronization

by Sebnem Kalemli-Ozcan, Elias Papaioannou and Josè Luis Peydró

Discussion by: Fabrizio Perri
University of Minnesota and Minneapolis FED

NBER SI, Summer 2009

The question

- What are the effects financial integration on business cycle comovement?

The state of the debate

- Empirical studies (Imbs, 2006), using cross sectional analysis, find a positive effect of financial integration on comovement, after controlling for other factors (i.e. trade integration)

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- Theoretical studies (Heathcote and Perri, 2004) show that, under productivity shocks, higher financial integration should has a negative effect on comovement

The contribution

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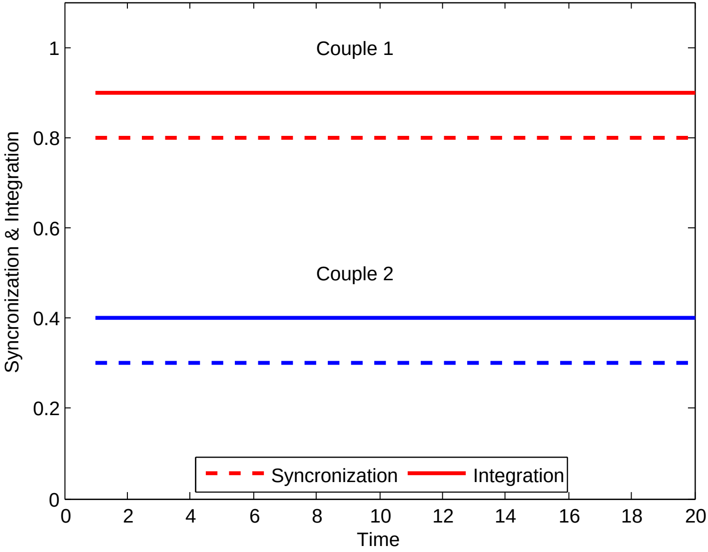
- Why panel is better?
- The fact that more integrated countries are more correlated could simply reflect fixed effects (i.e. cultural ties, historical links) that are hard to measure and might affect both syncronization and integration
- In a panel can control for couple specific fixed effects, so identify effects of financial integration from its changes for a specific couple of countries

A graphical illustration



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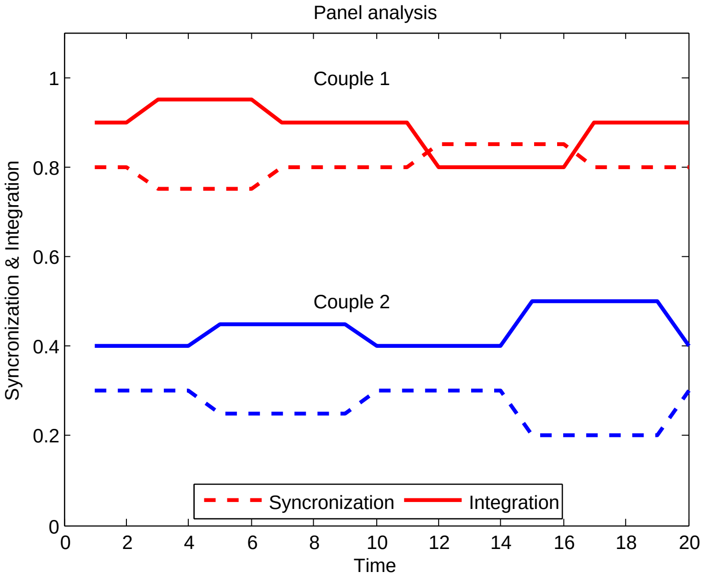

Main results

- In a panel regression changes in financial integration are significantly negatively associated with changes in syncronization (while in the cross section the two measures are positively associated)

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- IV analysis (doing a first stage regression of financial integration on possibly exogenous covariates such as changes in financial regulation or changes in exchange rate regime) suggests causation goes from integration to syncronization

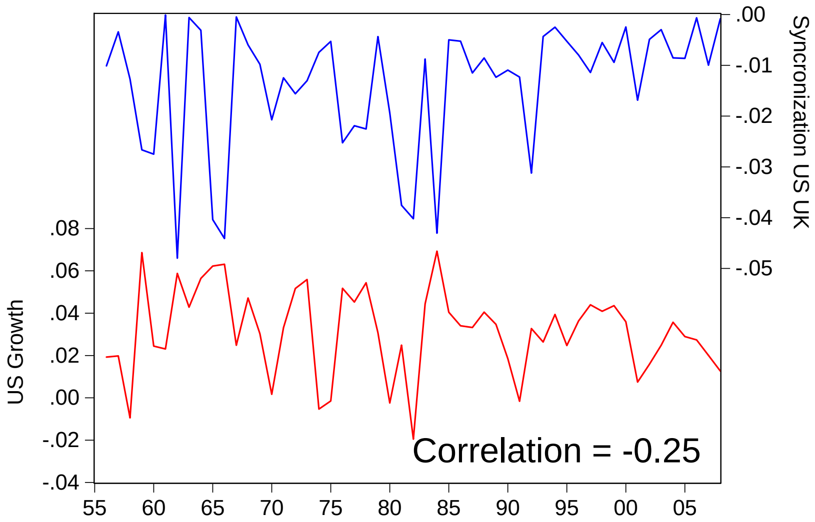
My comments

- A remark on the econometrics
- Why do we care about the result

An omitted variable problem?

- Business cycle syncronization is counter-cyclical
- Why? Some recessions are driven by global shocks
- Evidence:
- In the current recession many measures of business cycle syncronization have dramatically increased

US growth and US-UK Syncronization



Why is it a problem for the analysis?

- Integration is measured as $INT_{ij} = \frac{BH_{ij}+BHji}{POP_i+POP_j}$
- Since the denominator does not vary over the cycle I suspect bank integration is pro-cyclical (think about current recession)
- Since syncronization is countercyclical the negative relation between syncronization and integration might stem from cyclical fluctuations
- Solution?

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- Solution?
- Measure integration as $INT_{ij} = \frac{BH_{ij}+BHij}{BH_j+BH_i}$
- Hopefully results will stand but effect might be quantitatively different

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- Effects of financial integration on variance of growth? OK
- Effects of financial integration on comovement??

Using minimal theory

Consider the following toy model with productivity shocks $(A_1$ and $A_2)$, and credit shocks $(D_1$ and $D_2)$ (simplified version of Perri and Quadrini 2009)

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- Production

$$Y_1 = A_1 K_1^{\alpha}, Y_2 = A_2 K_2^{\alpha}$$

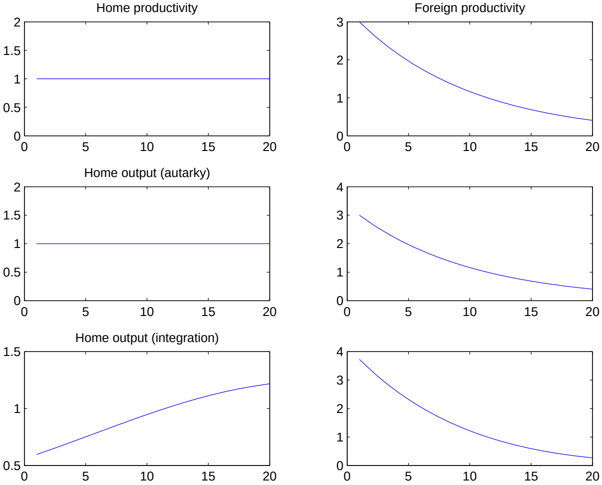
- Segmented financial markets

$$D_1 = K_1, D_2 = K_2$$

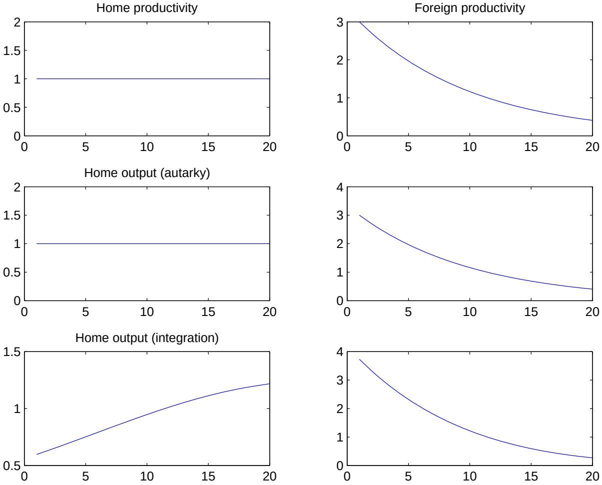
- Integrated financial markets

$$D_1 + D_2 = K_1 + K_2$$

Effects of financial integration with prod shocks

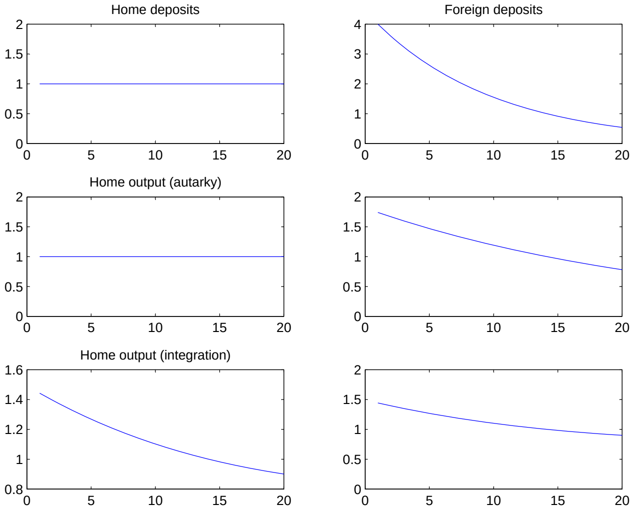


Effects of financial integration with prod shocks

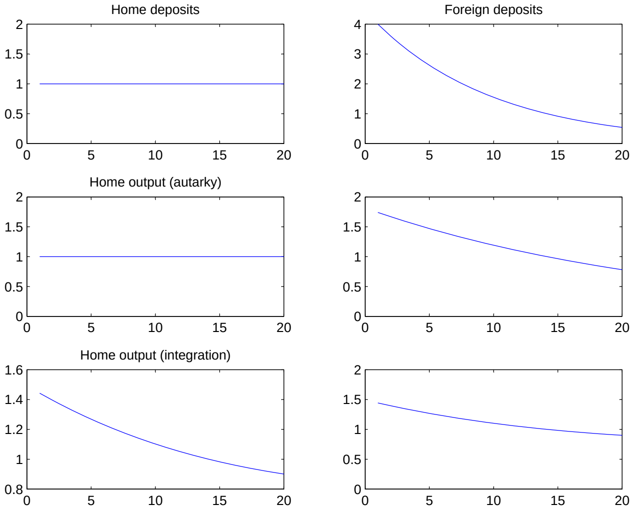


- Comovement falls with integration

Effects of financial integration with credit shocks



Effects of financial integration with credit shocks



- Comovement increases with integration

Main point

- The relation between integration and comovement is helpful to understand the nature of shocks!

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- Financial integration might have different effects on comovements of different variables
- For example in many (not all) models integration has ambigous effect on output comovement but non ambigous positive effect on consumption comovement
- When the effect is negative (i.e productivity shocks), it should be more negative on investment than on output
- Interesting to extend the analysis looking at the effects of integration on comovement of different variables to make results easier to interpret with theory

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- Seriously challenges one established view in empirical international finance
- Simple extensions could make it more robust and more useful for researchers and policy makers