‘Banking Across Borders’ by F. Niepmann

Discussion

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Motivation and key findings

Banking across borders increasingly important over the last 25 years with financial globalization and deregulation of countries banking sectors. Can take various forms: international banking, global banking...

Provides a theory of banking across borders driven by comparative advantage. Two key sources of heterogeneity across countries favour its emergence: differences in relative factor endowments ($K/L$ ratios) and relative banking sectors efficiencies. Empirical test of the main implications of the theory: everything else equal, differences in factor endowments favour the emergence of international banking while differences in factor efficiencies favor global banking. Countries bank balance sheets supportive of the main predictions.
Theory: starting with the basic neoclassical predictions.

Consider two countries (North and South). Population normalized to 1.

Same production technology. No intermediation costs. South capital scarce.

Assume perfect capital account liberalization: \( r_S = r_N \).

Capital flows from North to South: *international banking*

Balance sheets implications?

Assets of \( N \) in \( S \): \( A_{NS} > 0 \). No deposit raised abroad: \( L_{SN} = L_{NS} = 0 \)
Capital k

World interest rate

North autarky interest rate

South autarky interest rate

Interest rate $R$

$MPK$

North export capital: international banking

Capital account liberalization

k (South)  k (Integration)  k (North)
Theory: adding differences in banking efficiency.

Two countries (North and South). Same production technology. South capital scarce. North more relatively efficient banking sector ($c_S > c_N \approx 0$ in autarky).

As before: *international banking*. But additionally, with banking sector liberalization, banks from North raise deposit in the South and invest there: *global banking*.

Balance sheets implications?

Assets of $N$ in $S$: $A_{NS} > 0$. $N$ raises deposits in $S$: $L_{NS} > 0$. But $\frac{L_{NS}}{A_{NS}} < 1$. 
Autarky with different banking efficiencies
Capital $k$
North initial autarky interest rate
Interest rate $R$
$MPK$
North export efficiency: *global banking* (convergence in efficiencies)
World interest
South initial autarky interest rate
North export capital: *international banking*
Banking sector and capital account liberalization
Theory: relative role of differences in banking efficiencies versus capital scarcity

As differences in capital endowments fall, international banking decreases.

Up to a point where despite South being capital scarce, $r_S < r_N$: difference in banking efficiencies dominates.

For differences in capital scarcity low enough (relative to differences in efficiencies), international banking disappears and foreign sourcing appears. Bank from the North raise deposits in South to invest them in the North.

Balance sheets implications? Assets of $N$ in $S$: $A_{NS} > 0$. $N$ raises deposits in $S$: $L_{NS} > 0$. But $\frac{L_{NS}}{A_{NS}} > 1$. 
North export efficiency: *global banking.* A wedge remains across countries' efficiencies due to partial banking integration.

World interest

Partial banking sector liberalization. High differences in $k$.
Capital $k$

Autarky interest rates = World interest rate

Interest rate $R$

North export efficiency: global banking.

If lower differences in capital intensities: international banking decreases

Autarky interest rates = World interest rate

Partial banking sector liberalization. Lower differences in $k$. 
Partial banking sector liberalization. Very low differences in $k$. 

If even lower differences in capital intensities: *foreign sourcing*. 

North export efficiency: *global banking*. 

North autarky interest rate 

World interest rate 

South autarky interest rate 

Interest rate $R$ 

Capital $k$ 

$MPK$ 

$k$ (South) $k$ (North)
Empirical implications

Relative differences in banking efficiencies increase assets $A_{NS}$ and liabilities $L_{NS}$ of banks form $N$.

Relative differences in capital labour ratios increases assets $A_{NS}$ but decreases liabilities $L_{NS}$.

$$\left(\frac{L_{NS}}{A_{NS}}\right)$$ decreases with degree of *international banking* (i.e with differences in capital labour ratios): *international banking* and *global banking* substitutes

Empirical strategy: exploit cross-country variations in capital labour ratios and banking efficiencies on banking assets and liabilities
Empirical strategies: some caveats

Comment 1: Potential misspecification(s)?

- Unobservable variables affecting \( MPK \) (or risk-adjusted \( MPK \)), and thus the degree of international banking and which correlates with banking sector efficiencies (or \( K/L \)).

TFP differences is an obvious candidate. ‘Riskiness’ of a country has similar effects.
Theory: what about TFP differences?

Two countries (North and South). Same banking sector efficiencies but different TFP levels (different quality of institutions, technology, misallocations of factors...). South capital scarce.

When differences in endowments large relative to TFP differences: North go into international banking.

If TFP differences get larger, international banking falls.

If TFP differences large relative to differences in endowment. South is the low interest rate country. Capital flows away from South. South engages in international banking.
Capital account liberalization with differences in TFP. High differences in $k$. 
Capital account liberalization with differences in TFP. Small differences in $k$. 

Interest rate $R$

High TFP

Low TFP

North autarky interest rate

World interest rate

South autarky interest rate

Capital $k$

$K$ (South)

$K$ (North)
From theory to empirical strategy: what about TFP differences?

Last point implies that TFP differences (relative to differences in factors endowments) correlates (negatively) with degree of international banking from North to South.

Potentially differences in TFP correlates (positively) with differences in banking sector efficiencies (and also with $K/L$)

Implies that one needs to control properly for cross-country differences in TFP in the regressions otherwise biased estimate (à priori downward bias).

Partly done with institutional variables and using human-capital adjusted $K/L$. Still cross-section estimation cannot deal very well with ‘other’ country-level differences affecting $MPK$. 
Empirical strategies: some caveats

Comment 2: Potential misspecification(s)?

- Global banking and international banking roughly speaking ‘substitutes’. Information costs/asymmetries will tend to make them ‘complementary’ activities, especially at the country-level [think of Spanish banks in Latin America]. Partially controlled for with usual gravity variables (or in the follow-your-customer specification) but still can explain why it is difficult to get robust evidence on the banks liability side. Share the same difficulties as the Trade versus FDI early literature.
Empirical strategies: some caveats

Comment 3: Potential misspecification(s)?

- Simultaneity/endogeneity issues with resp. to \textit{bilateral} banking integration (or more broadly \textit{bilateral} financial integration). Banking integration between two countries increases $A_{ij}$ and $L_{ij}$ and should lead to a convergence in banking efficiencies between countries. If not properly controlled for, biased estimates. Five-years lag enough? Might want to use data pre-banking/financial integration.

Issue even worse if banking integration is endogenously more likely when countries have very different efficiency levels.
Empirical strategies: some caveats

Comment 4: Data issues: one way versus two-ways flows

- Interbank assets and liabilities. How do you control for those? Could they be removed or net out?

- Risk diversification. International risk diversification channels for international banking (and global banking) shut down. Asset perfect substitutes and only one-way capital flows.

Might want to look at net assets ($A_{NS} - A_{SN}$) (resp. net liabilities) instead of gross?
Conclusion

Very interesting paper. Relevant step towards a theory of cross-border banking.

Nice mix between theory and empirical evidence.

Still some need to strengthen a bit the empirical evidence as cross-sectional identification easily subject to a number of critics.