Bruce Smith on Financial Intermediation and Development

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The Historical and Intellectual Background

- first wave of the freshwater revolution – criticized by the saltwater school for naive models without frictions
- second wave of the freshwater revolution – led by Bruce Smith, a graduate of a saltwater school
- the second wave introduces serious market frictions – and the intellectual debate is over

The Intermediation Story Everyone Agrees On

I have useful machines: do I

- keep them in my basement to sell if I need to buy something?
- lend them out to other people to use in production?

intermediation allows me to do both

the devil is in the details

Bruce's trademarks

- a comprehensive theory
- dynamic general equilibrium models – generally OG
- frictions: Diamond/Dybvig taste shocks, locational shocks
- the heart of these models are shocks that can be insured only by holding money

Bruce didn't have much patience with elaborate theories of money – we know what money is and what it does: he wanted to understand the consequences

Unique Features of Developing Countries

- the need to monetize deficit, i.e. the depend on the inflation tax
- less well organized financial markets, so money plays a greater role

Development

“Intermediation and the Equilibrium Allocation of Investment Capital: Implications for Economic Development,” (with John Boyd), Journal of Monetary Economics, 30 (1992): 409 432.

“Financial Markets in Development, and the Development of Financial Markets,” (with Jeremy Greenwood), Journal of Economic Dynamics and Control, 21 (1997): 145 181. (Reprinted in Cuadernos Economicos 58 (1994) under the title Los Mercados Financieros en al Desarrollo, y el Desarrollo de los Mercados Financieros.)

“Credit Market Imperfections and Economic Development: Theory and Evidence,” (with Chien-Hui Ma), Journal of Development Economics, 48 (1996): 351 387.

“Economic Development and Financial Depth in a Model with Costly Financial Intermediation,” (with Valerie Bencivenga), Research in Economics/Ricerche Economiche, 52 (1998): 363-386.

“The Evolution of Debt and Equity Markets in Economic Development,” (with John Boyd), Economic Theory, 12 (1998): 519-560.

Growth Theory

“Some Consequences of Credit Rationing in an Endogenous Growth Model,” (with Valerie Bencivenga), Journal of Economic Dynamics and Control, 17 (1993): 97 122.

“Transactions Costs, Technological Choice, and Endogenous Growth,” (with Valerie Bencivenga and Ross Starr), Journal of Economic Theory, 67 (1995): 153 177.

“The Co-Evolution of the Real and Financial Sectors in the Growth Process,” (with John Boyd), World Bank Economic Review, 10 (1996): 371 396.

“Capital Market Imperfections in a Monetary Growth Model,” (with John Boyd), Economic Theory , 11 (1998): 241 273. - Inflation, Financial Markets, and Capital Formation (with John Boyd and Sangmok Choi), Federal Reserve Bank of St. Louis Review, 78 (1996): 9 35. -

“Capital Market Imperfections, International Credit Markets, and Nonconvergence,” (with John Boyd), Journal of Economic Theory, 73 (1997): 335 64.

“Capital Market Frictions, Monetary Policy, and Capital Accumulation in a Small Open Economy,” (with Elisabeth Huybens), Journal of Economic Theory, 81 (1998): 353 400.

“Secondary Capital Markets, Long-run Growth, and the Term Structure of Asset Yields,” (with Valerie Bencivenga and Ross Starr), International Economic Review, 41 (2000): 769- 800.

“Financial Intermediation and Endogenous Growth”

(with Valerie Bencivenga), Review of Economic Studies, 58 (1991): 195 209. (Reprinted in Economic Growth: Theory and Evidence, Gene Grossman (ed.), Edward Elgar Publishing.)

lead article in the Special Issue: The Econometrics of Financial Markets, May, 1991

- intermediaries allow the shifting of savings from unproductive money to productive capital
- technically combines OG model with endogenous growth model
- how the introduction of intermediaries enhances growth

“Deficits, Inflation, and the Banking System in Developing Countries: the Optimal Degree of Financial Repression”

(with Valerie Bencivenga), Oxford Economic Papers, 44 (1992): 767 790. (Reprinted in Financial Markets, Institutions and Policy, A.S. Courakis (ed.), Oxford University Press.)

- financial “repression” in development hinders the development of a banking sector, keeping interest rates high and impeding development
- repression = high reserve requirements and/or deposit interest rate ceilings
- what if it is necessary to monetize a sustained deficit?
- efficiency of inflation tax improved by “repression”
- studies output/taxation efficiency tradeoff

- liberalization may simply shift resources from “informal” to “formal” sector without increasing investment (but in the GE setting, this does improve efficiency) (structuralist critique)
- steady state with binding reserve requirement
- “developing” country – does not have many financial markets; has an informal sector
- when reserve requirements are set optimally reductions in government spending should be accompanied by liberalization

“The Effects of Open Market Operations in a Model of Intermediation and Growth”

(with Stacey Schreft), Review of Economic Studies, (1998): 519-550.

- spatial separation and limited communication creates a role for banks
- specifically, random reallocation of traders between locations forces them to hold money which is the only portable asset
- reserve ratio increasing in the nominal interest rate
- tight money (=increase in bond to money ratio) can lead to multiple steady states, indeterminacy and oscillations; raises interest, inflation and reduces long-run output

Argentina and the Contemporary Message

- Neumeyer: the fundamentals were good, including the deficit
- drastic steps to curb the deficit
- currency board originally introduced to cure high inflation – tied Argentina to tight US money policy
- combined with liberal banking rules
- worked well in Hong Kong – but HK much higher income and much more highly developed financial markets
- according to Bruce: should lead to indeterminacy and oscillations, restrain growth
- instead of a modest expansionary policy combined with some repression, had tight money with liberal banking
- perhaps it is not too late to follow Bruce's advice?