Capital Flows & Demography

Dave Backus
Based on work by Tom Cooley, Espen Henriksen, and Jan Möller

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Outline

Capital Flows: Thoughts

Thoughts about capital flows

Michael Bordo, "Globalization in historical perspective," 2002

> *The fifty years before World War I saw* **massive flows of capital** *from Western Europe to (mainly) the Americas and Australasia. At its peak, the outflow from Britain reached nine percent of GNP and was almost as high in France, Germany, and the Netherlands. Private capital moved essentially without restriction ... into bonds that financed railroads and other infrastructure — and into government debt.*

Link: http://econweb.rutgers.edu/bordo/nabe.pdf

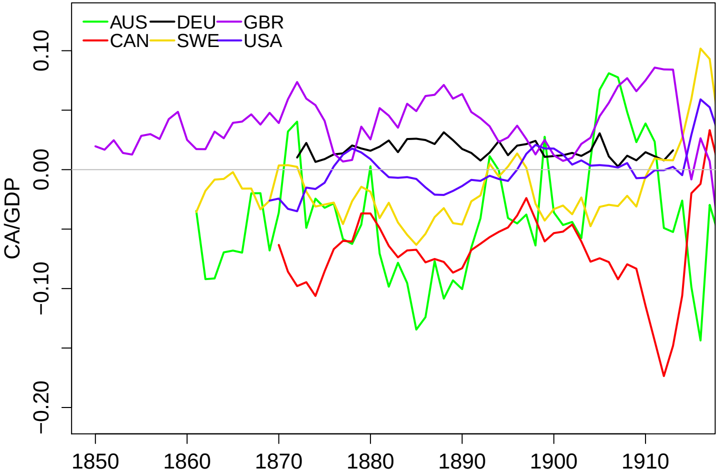
Thoughts about capital flows

Lars Jonung, "Sweden under the gold standard," 1984

> *In the second half of the nineteenth century, Sweden began a process of industrialization financed by considerable* **capital imports** *which transformed a basically agrarian country into an industrialized society.*

From Bordo & Schwartz, *Retrospective on the Gold Standard*

Thoughts about capital flows



Source: Jones and Obstfeld

Thoughts about capital flows

Michael Bordo, "Globalization in historical perspective," 2002

> *A striking feature is the size and* **persistence** *of current account deficits in this period, esp in Australia, Canada, Argentina, and the Nordic countries, as well as the surpluses of the UK and France.*
>
> *This globalization of finance had its dark side — in* **periodic crises** *when capital flows abruptly reversed themselves.*

Link: http://econweb.rutgers.edu/bordo/nabe.pdf

Thoughts about capital flows

John Maynard Keynes, 1941-42

> *I disagree most strongly that the control of capital movements may be unnecessary. ... I see no reason to feel confidence that the more stable conditions [of the post-war era] will remove the more* **dangerous movements** *[of capital].*
>
> *Central control of capital movements, both inward and outward, should be a permanent feature of the post-war system.*

Quoted by Crotty, JEL, 1983

Thoughts about capital flows

Daniel Gross, *New York Times*, May 8, 2005

> *[US] imbalances are eerily reminiscent of recent economic crises. Could we see a perfect storm [for the US economy]? If so, what would it look like?*
>
> - *Nouriel Roubini estimates that long-term interest rates in the US could rise sharply and the dollar fall.*
> - *Jeffrey Frankel adds: "some of us have been warning of this hard-landing scenario for more than 20 years."*

Thoughts about capital flows

Group of 20, Communique, April 15-16, 2011

> *We agreed on a set of indicative guidelines ... to address* **persistently large imbalances**. *We now launch ... an in-depth assessment of the nature of these imbalances and the root causes of impediments to* **adjustment**. *... We will ascertain for our next meeting the corrective and preventive measures.*

Øystein Olsen, Norges Bank, March 2011

> **Global trade imbalances** *have been reduced somewhat over the past two years, but there is a considerable risk that they will persist. They must be corrected.*

Thoughts about capital flows

Dick Caves and Ron Jones, *World Trade and Payments*, 1973

> *By accounting rule, credits (or receipts) make the balance positive or "favorable." Debits are "unfavorable." Notice the gravitational pull of semantics! The receipts side owns all the good words, and has done so since the eighteenth-century mercantilists made a virtue of "storing up treasure."*

(first edition, page 87, lightly edited)

Thoughts: summary

Long history of ambivalence over capital flows

- Facilitator of economic growth?
- Or source of instability?

Suggestion: don't let the words decide

- Find and replace:
  "global imbalances" $\Rightarrow$ "international capital flows"

Our focus

- Where do capital flows come from?
- Why are they so persistent?

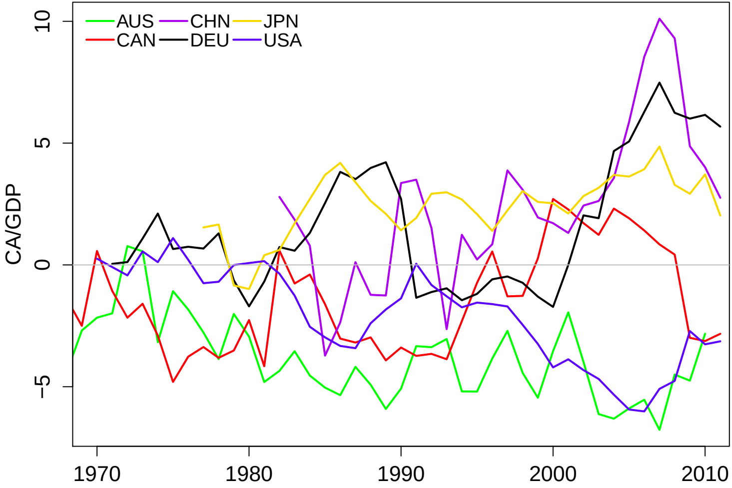
Capital Flows: Evidence

Evidence: capital flows

Largest inflows	Amount (b$US)	Largest outflows	Amount (b$US)
United States	–470	**China**	306
Italy	–72	**Japan**	195
Spain	–63	Germany	176
United Kingdom	–56	**Mideast oil**	150
France	–53	Switzerland	75
India	–49	Russia	71
Turkey	–49	Netherlands	56
Canada	–49	**Norway**	53
Brazil	–47	Taiwan	41
Greece	–32	Sweden	30
Australia	–32	Korea	28
Portugal	–23	Malaysia	28
Total inflows	–1183	Total outflows	1466

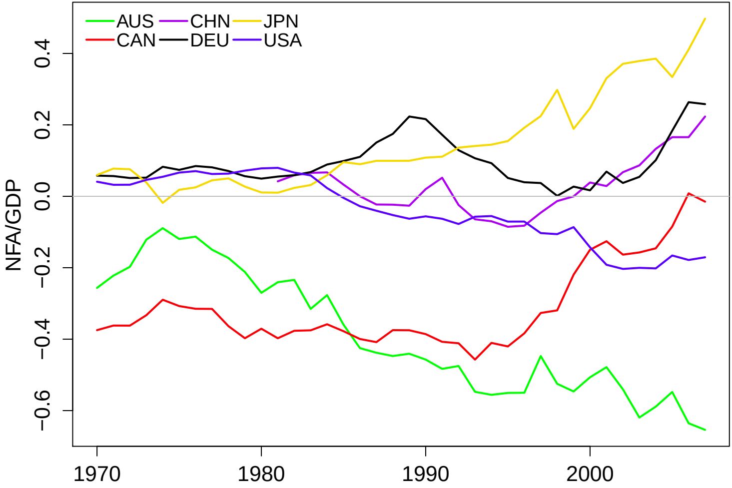
Source: IMF, WEO, April 2011 version, data for 2010

Evidence: capital flows



Source: World Bank, World Development Indicators

Evidence: net foreign assets



Source: Lane and Milesi−Ferretti

Evidence: capital flows and stocks

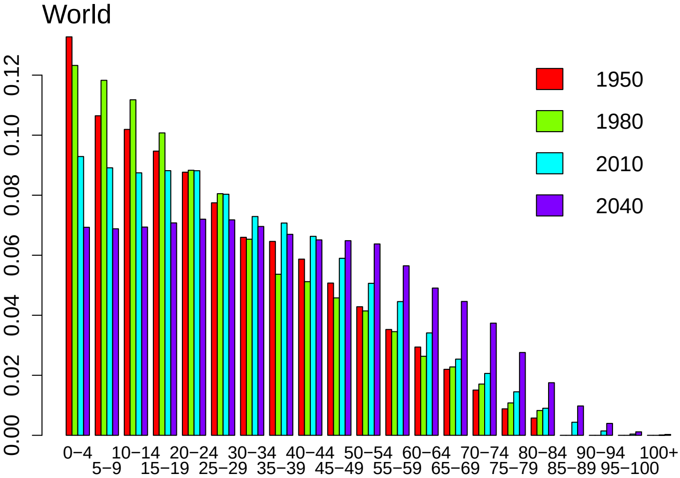
Capital flow variation is low-frequency
(so much for HP filtering)

Ditto net foreign assets

No evident tendency for either to move toward zero
(where's the "external balance condition"?)

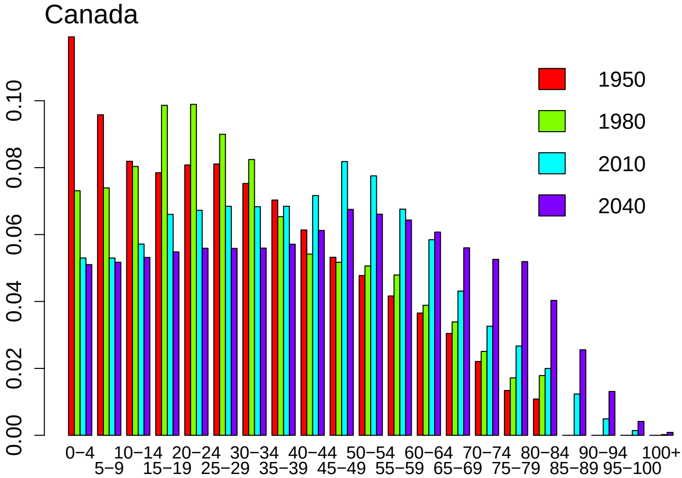
Demography

Evidence: demography



Source: United Nations, Population Estimates and Projections

Evidence: demography



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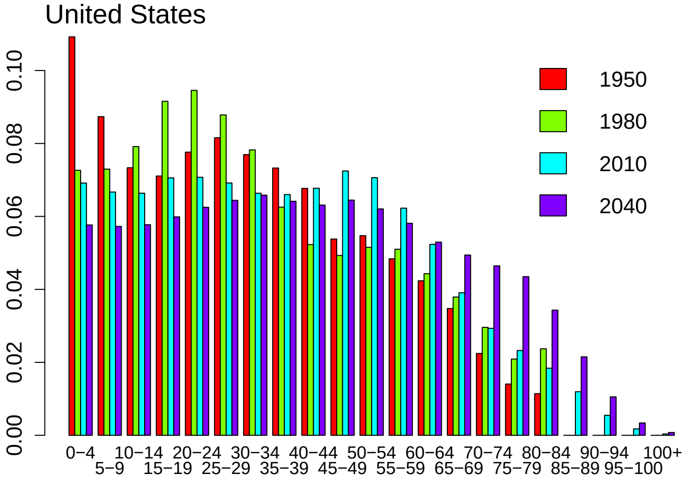

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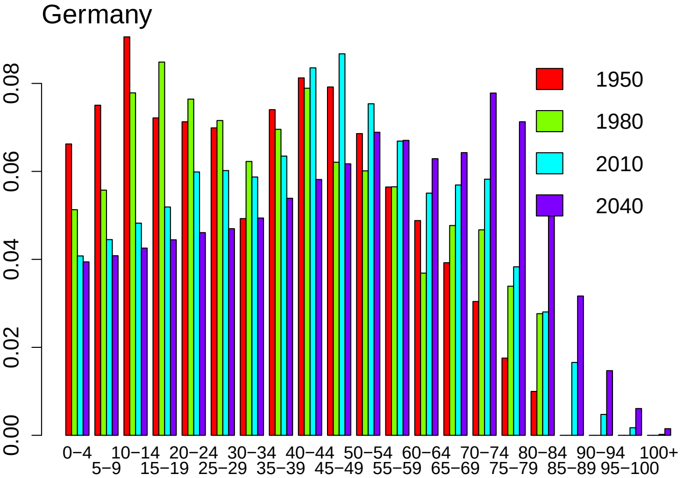

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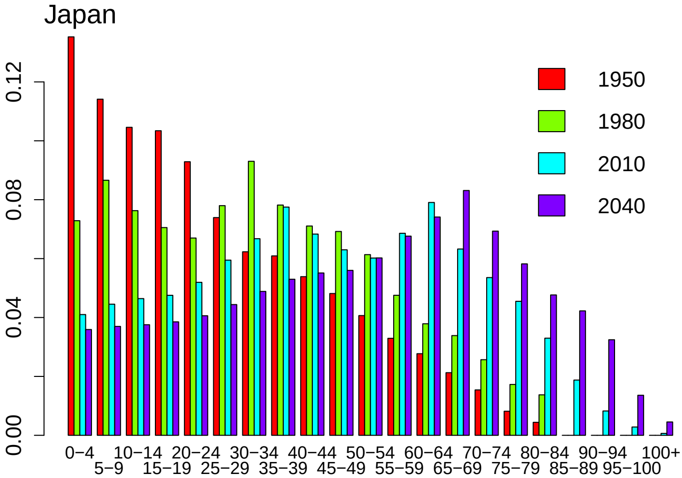

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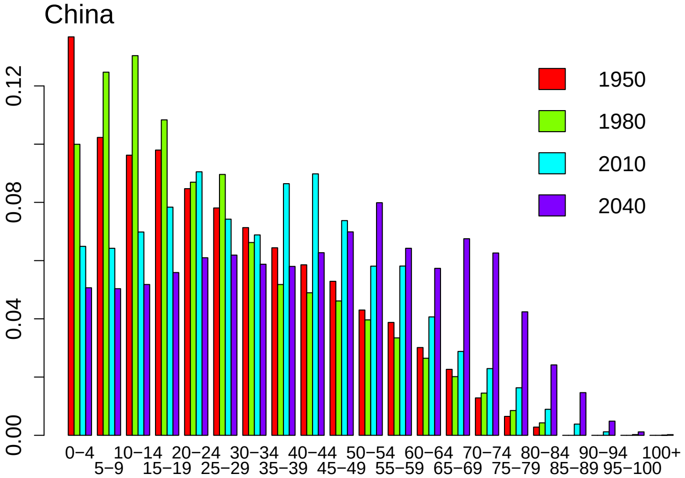


Source: United Nations, Population Estimates and Projections

Model (a progress report)

Model: motivation

Capital flows and stocks are persistent

Demography inherently persistent — and different across countries

Worth exploring a connection?

[Apparently yes: Attanasio-Kitao-Violante, Bloom-Canning, Boersch-Supan-Winter, Brooks, Domeij-Floden, Feroli, Ferrero, Henriksen, Krueger-Ludwig, and others all had the same idea]

Model: structure

One-good world

Overlapping generations, realistic mortality rates

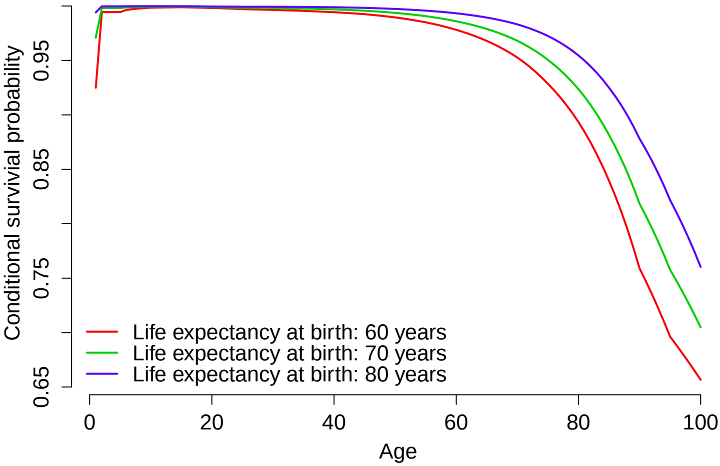
Key ages: start working/consuming at 21, retire at 65

Preferences: power utility over consumption, fixed labor supply

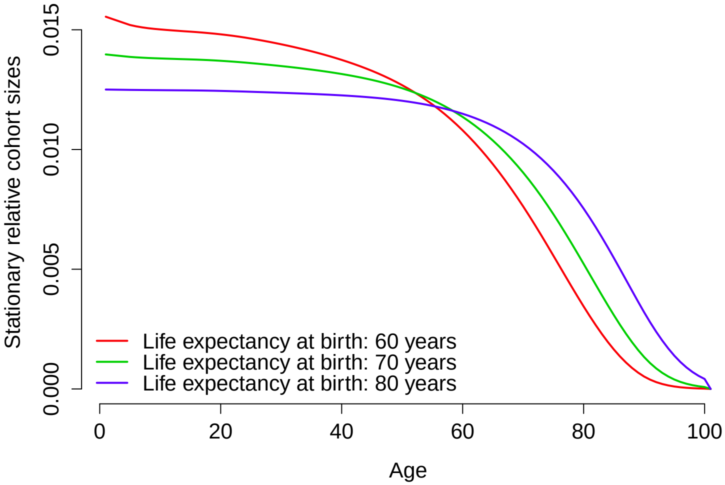
Technology: CES production, country-specific productivity

Today: explore impact of changes in life expectancy

Model: mortality



Model: age distribution



Model: net foreign assets

Capital allocated to equate marginal products

- Connected to age distribution via effective labor input
- Equates K/Y across countries

Net worth follows from life-cycle saving

- Saving and net worth depend on life expectancy
- Also age distribution

NFA is difference between net worth and capital stock

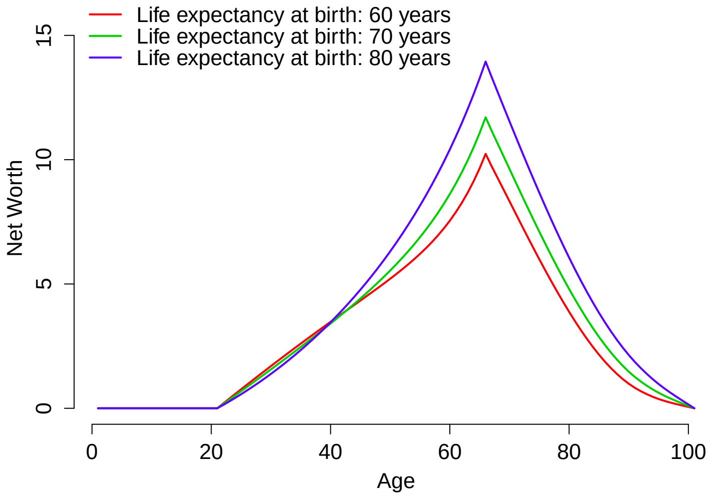
Model: steady state calculations

Impact of life expectancy

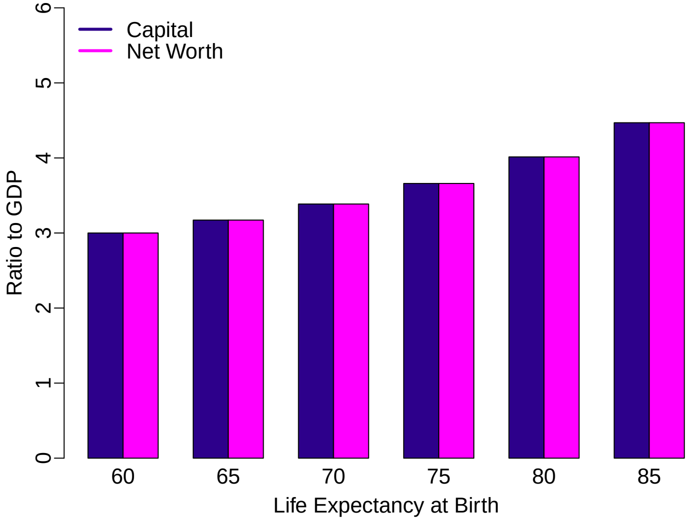
Two versions

- Closed economy: capital stock and interest rate adjust
- Open economy: interest rate fixed, NFA adjusts

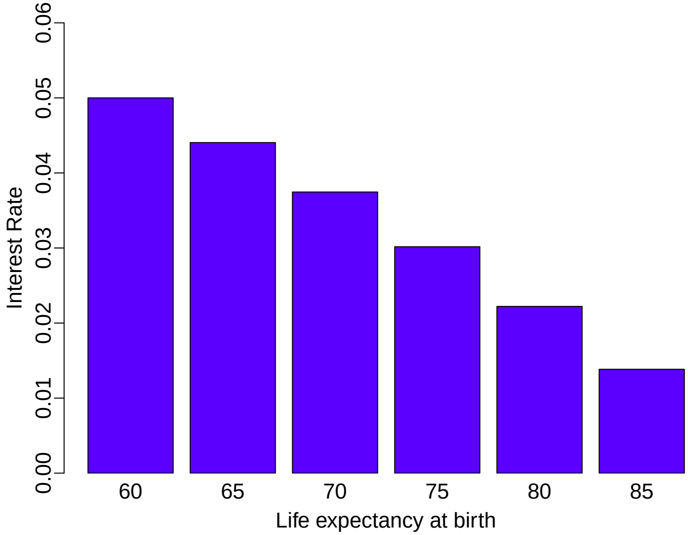
Model: closed economy net asset profile



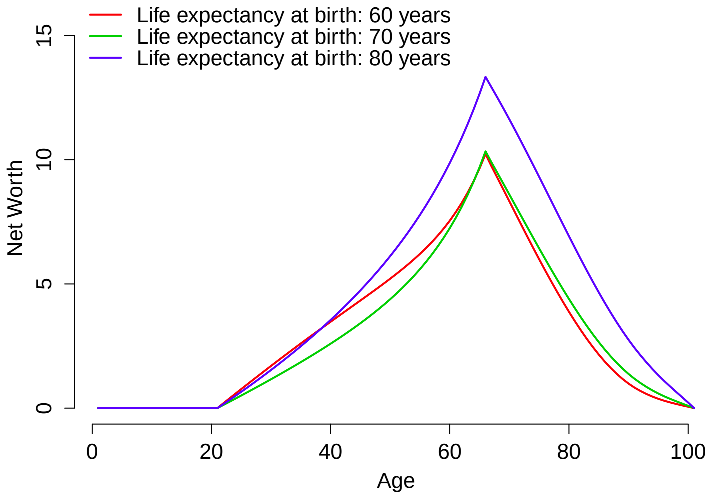
Model: closed economy capital and wealth



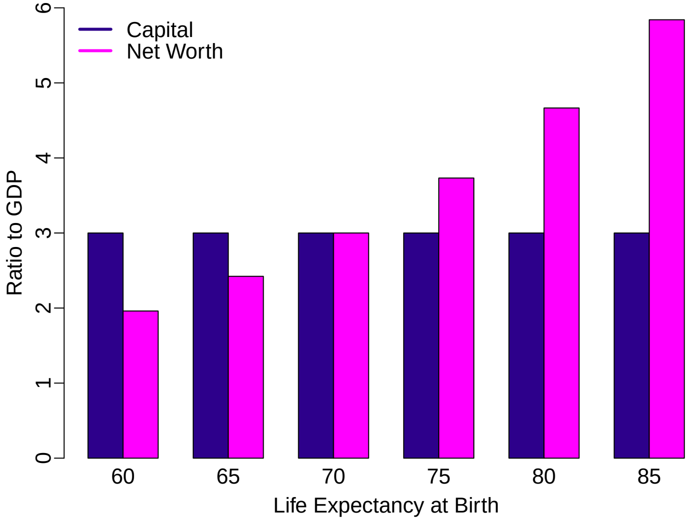
Model: closed economy interest rate



Model: open economy net asset profile

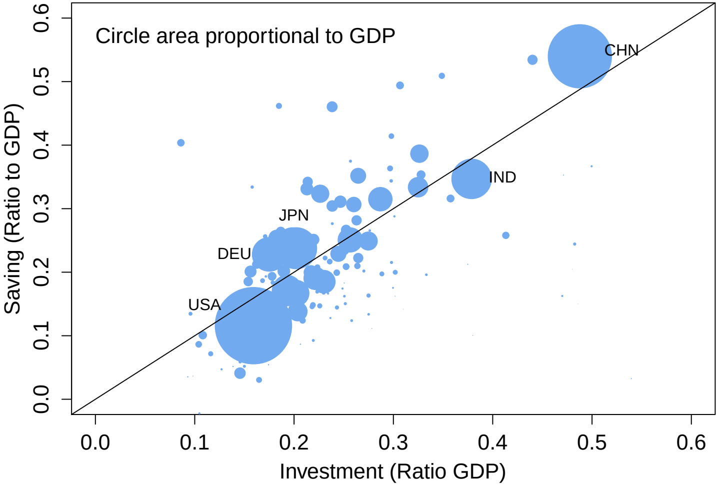


Model: open economy capital and wealth



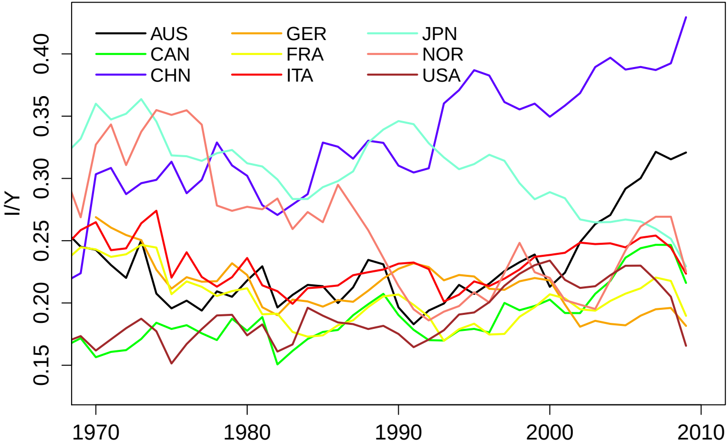
China

Why are China's saving and investment rates so high?



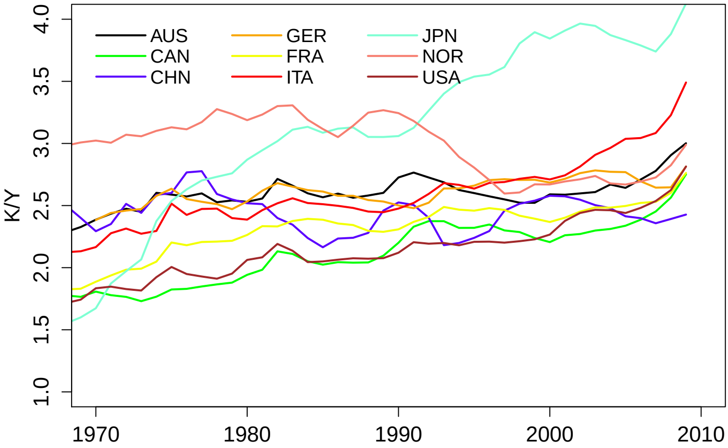
Source: IMF, WEO, April 2011, data for 2010

Does China have too much capital?



Source: Penn World Tables

Does China have too much capital?



Source: Penn World Tables, authors' calculations

Why is saving so high?

Demography?

Precautionary saving?

High "business saving"?

Other?

Last thoughts

Capital flows

- A fact of life for more than a century
- Persistent
- A role for demography?
- What else would you suggest?

Open questions

- Why are capital-output ratios so different across countries?
- Why are saving rates so different across countries?
- Why is China's so high?