Finance and Growth: Too much of a good thing?

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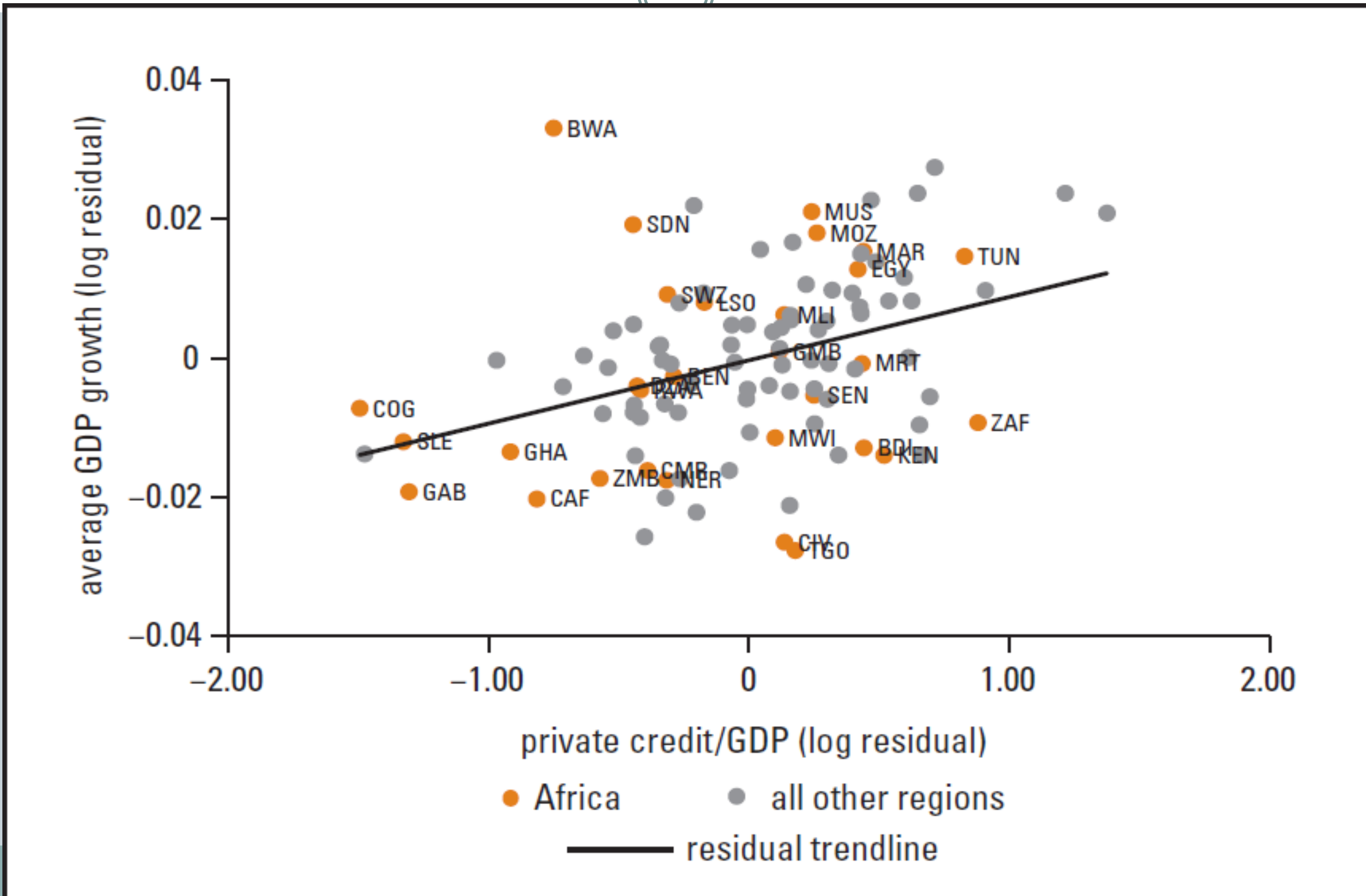
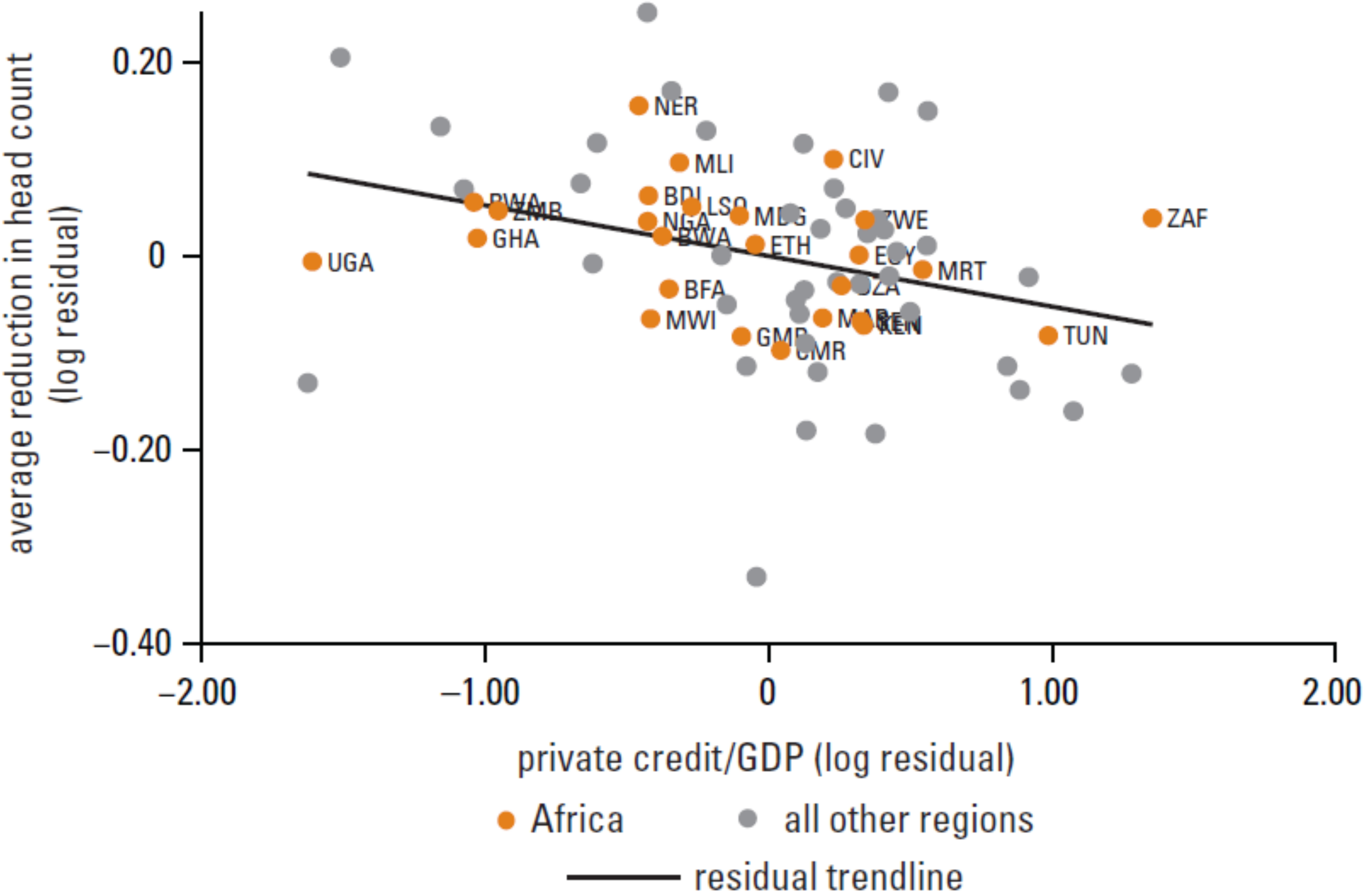
Finance and growth – an outline

- What we thought we knew
- What we found out the hard way
- And how do we interpret it
- What we have learned
- What it implies for policy
- And what we should research further

The pre-2007 consensus: Finance is pro-growth

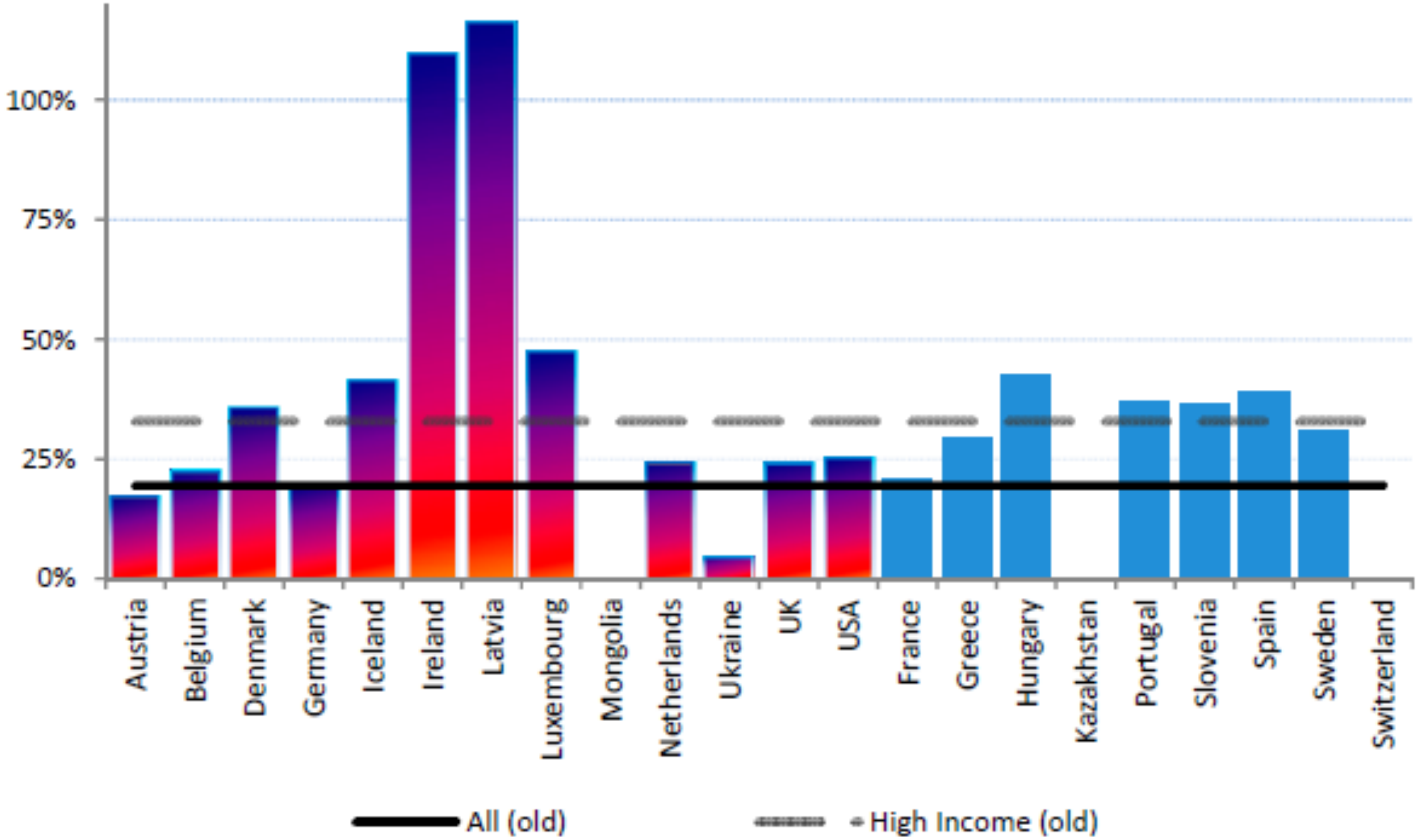


…and pro-poor…



average reduction in head count (log residual)
0.20
0
−0.20
−0.40
−2.00
−1.00
0
1.00
2.00
private credit/GDP (log residual)
NER
MLI
CIV
BDI
LSO
MDG
ZWE
ZAF
RWA
ZMB
NGA
BWA
ETH
GHA
UGA
MRT
BFA
MWI
KEN
TUN
CMR
Africa
all other regions
residual trendline

…but also fragile



Output losses relative to potential output;
Source: Laeven and Valencia (2010)

..and all this consistent with theory

- Critical function of financial system in
  - Easing exchange
  - Pooling savings
  - Selecting and monitoring projects
  - Mitigating liquidity risk
  - Mitigating cross-sectional and inter-temporal risk
- But: Providing liquidity insurance makes banks fragile
- Agency problems between banks and borrower mirrored by agency problems between depositors and banks
- The third agency problem: government vs. banks, based on externalities of bank failure

Can there be too much of a good thing?

- Does financial sector attract too much human capital and extract excessively high rents from rest of economy?
- Credit expansion resulting in boom-bust cycles?
- Political interference resulting in over-sized financial system?
- How important is financial deepening for economic development and poverty alleviation, compared to other policy areas?

Finance and Growth – the evidence

- Instrumental variable approach
  - Cross-country – historical and geographic experience as external instruments
  - Panel – internal instruments
- Time-series approach: forecast capacity of finance for growth
- Differences-in-differences approach: smoking gun
- Firm-level evidence
- Household-level evidence

BUT ALSO:

- Credit growth a very good crisis predictor

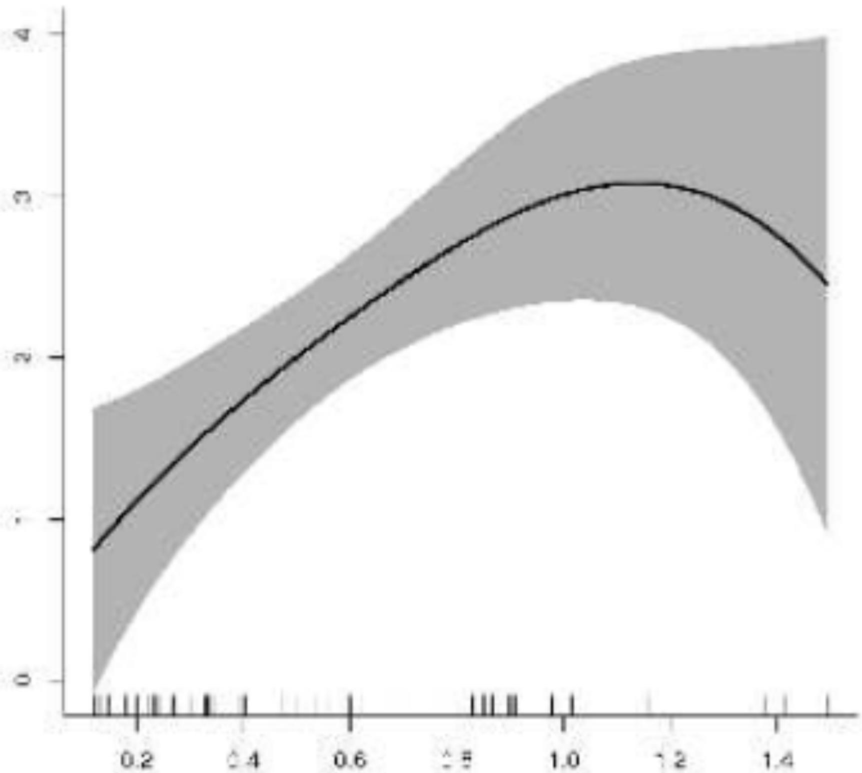
Channels of pro-growth and pro-poor finance

- Productivity growth more than capital accumulation
- Transformational effects: innovation, new entry, competition, more efficient asset allocation
- Pro-poor effects: Access to credit? Not necessarily – differential effects across different groups (recent work by Banerjee et al.)
- Pro-poor effects: important indirect effects
  - Allocation effects
  - Labor market and migration effects
  - Evidence from Thailand, U.S. and India

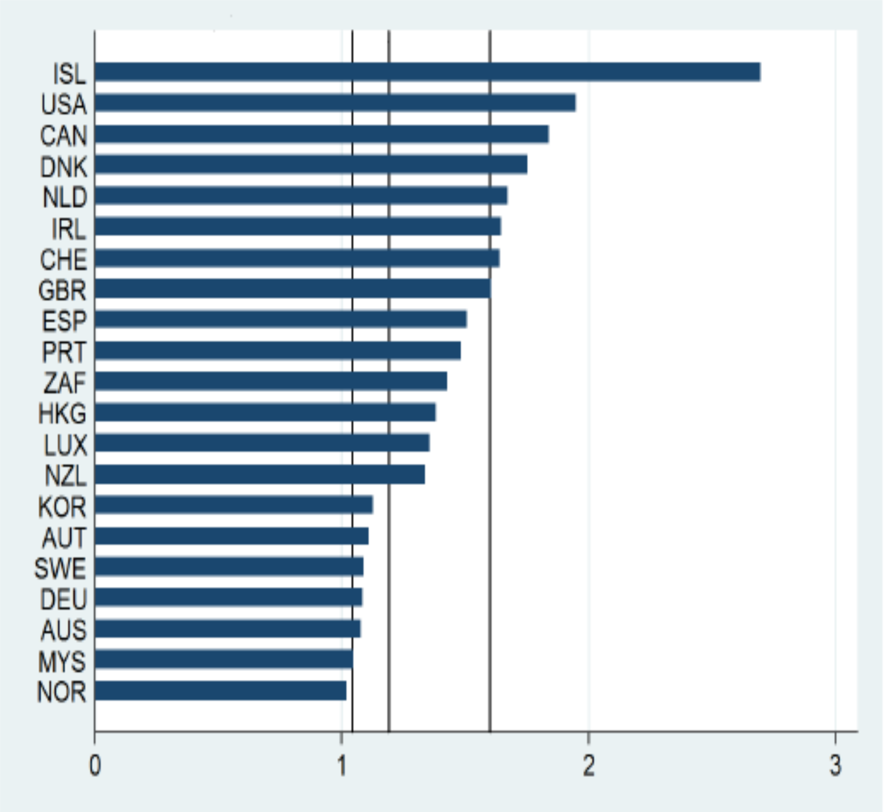
Intermediaries vs. markets – the financial structure debate

- Important differences in the way intermediaries and markets function (information creation, governance role, risk management)
  - Behind this is broader distinction between relationship vs. arms-length finance model
- No clear evidence that one model works better than the other
  - Complementarity, necessary competition
  - Might be too much of one segment (e.g., bank bias in Europe)
- As financial systems develop, stronger role for non-bank segments of the financial system, including for capital markets
- Artificial creation of new segments rarely meets with success
  - See stock exchanges in small low-income countries
- Analysis of financial structure requires careful analysis of demand and supply-side constraints
- Role of alternative finance

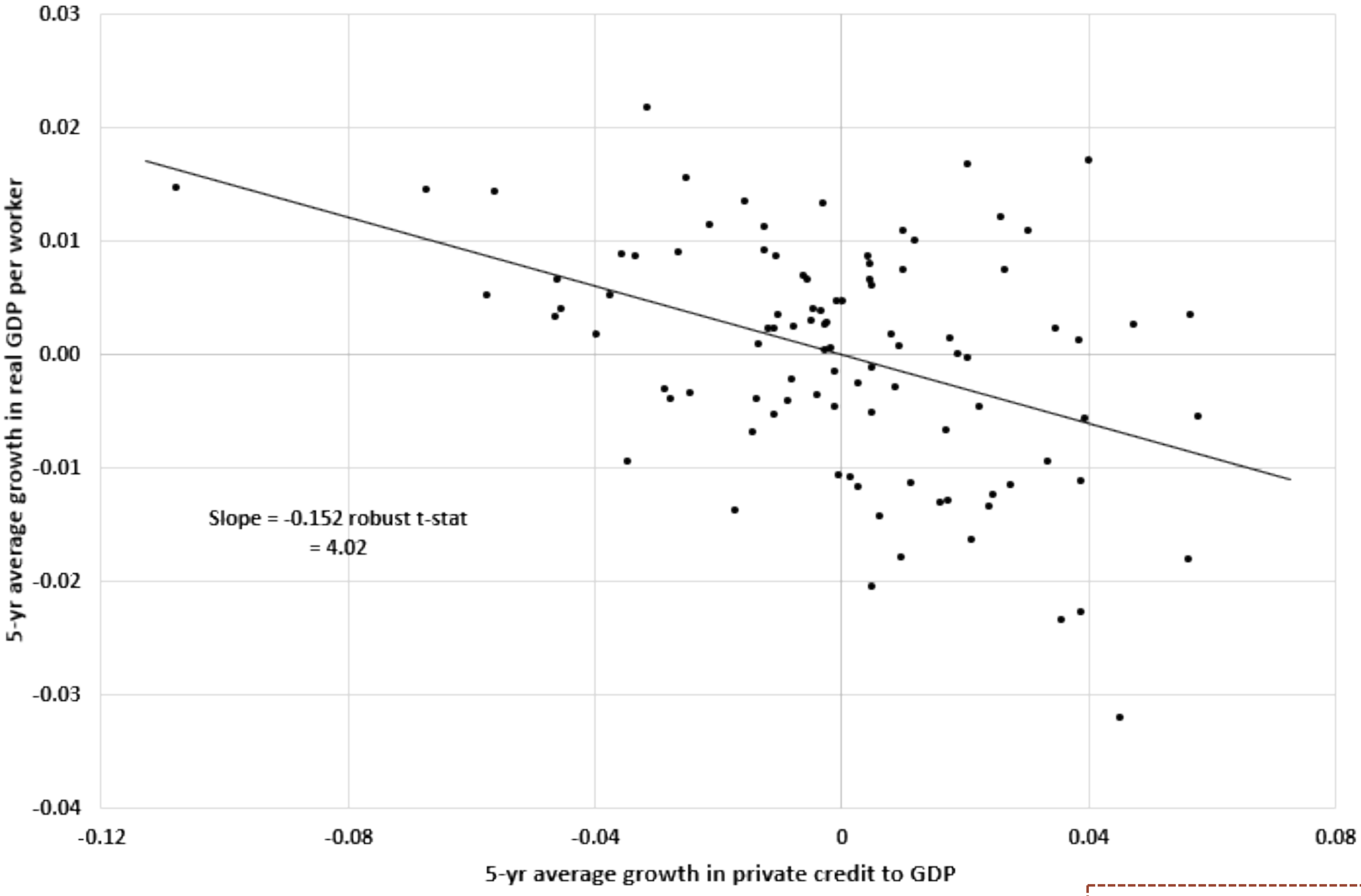
Is finance really pro-growth?



Arcand, Berkes and Panizza, 2012



Or maybe even a drag on productivity growth?

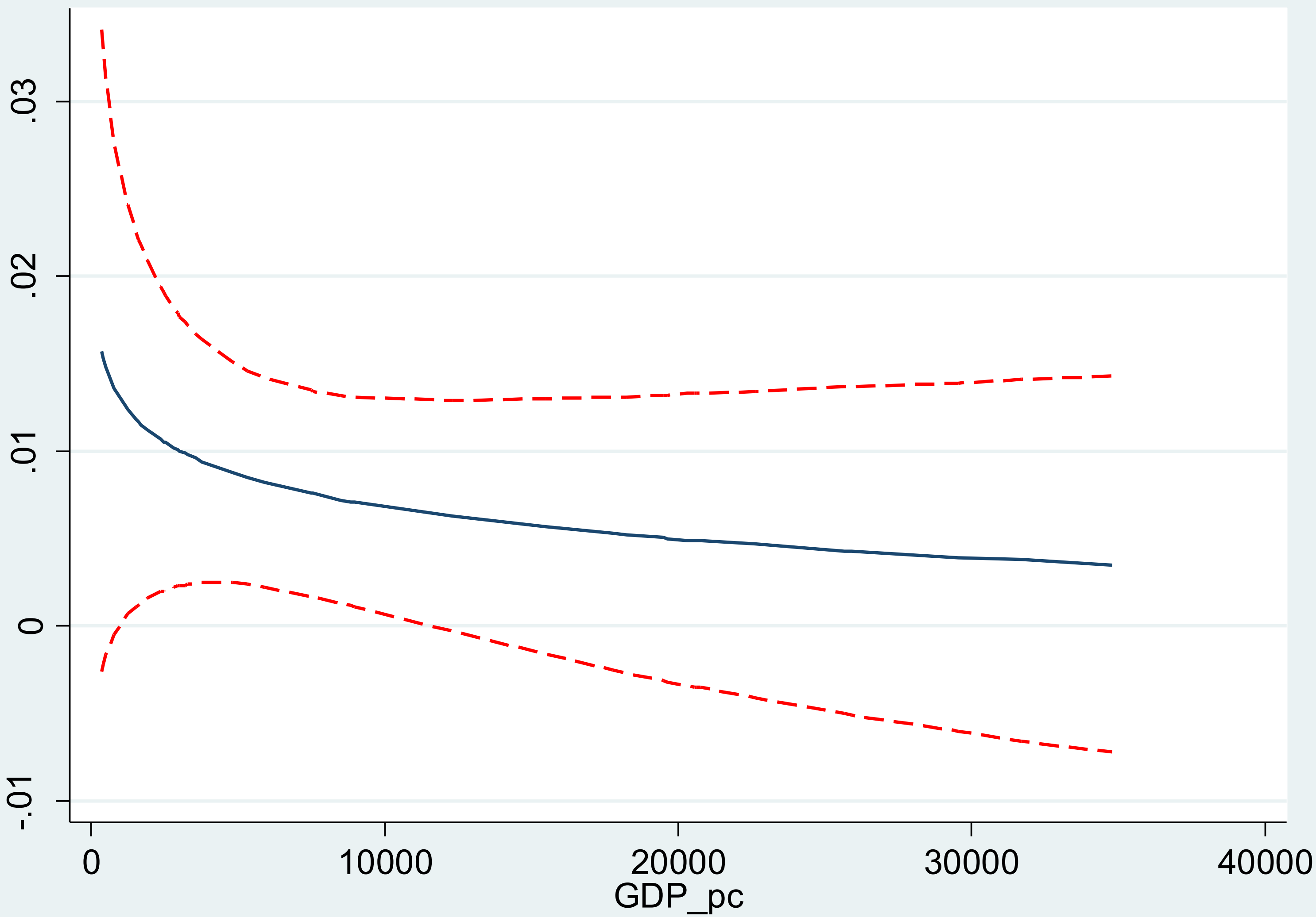


Cecchetti and Kharroubi, 2015)

Non-linearities in finance and growth

- Relationship between finance and growth varies across countries, and systematically so with GDP per capita
- Explanations:
  - Banks are going into non-intermediation business lines
  - Finance only helps to reach frontier, but not once country gets there
  - Who gets credit?
  - What kind of concept of the financial system?
  - Boom-bust periods

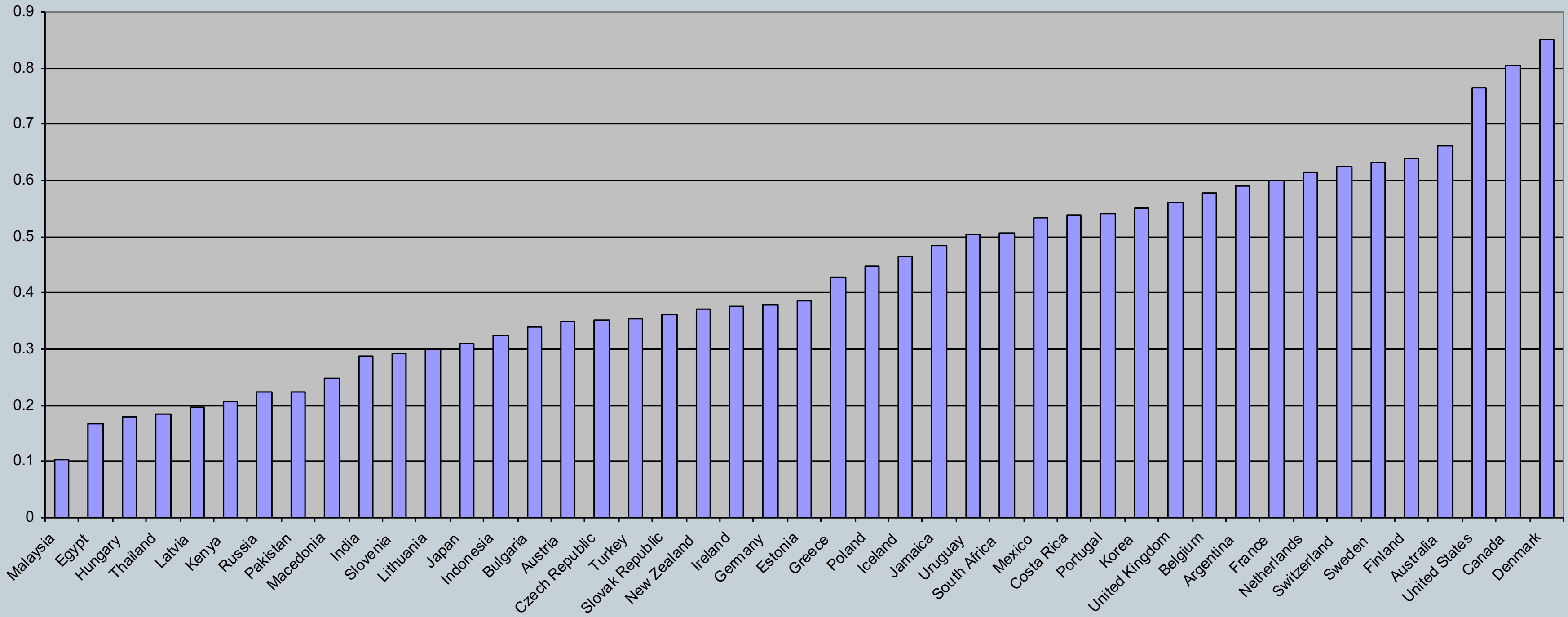
How much "bank" for the buck?
The effect of bank credit on growth as function of GDP per capita



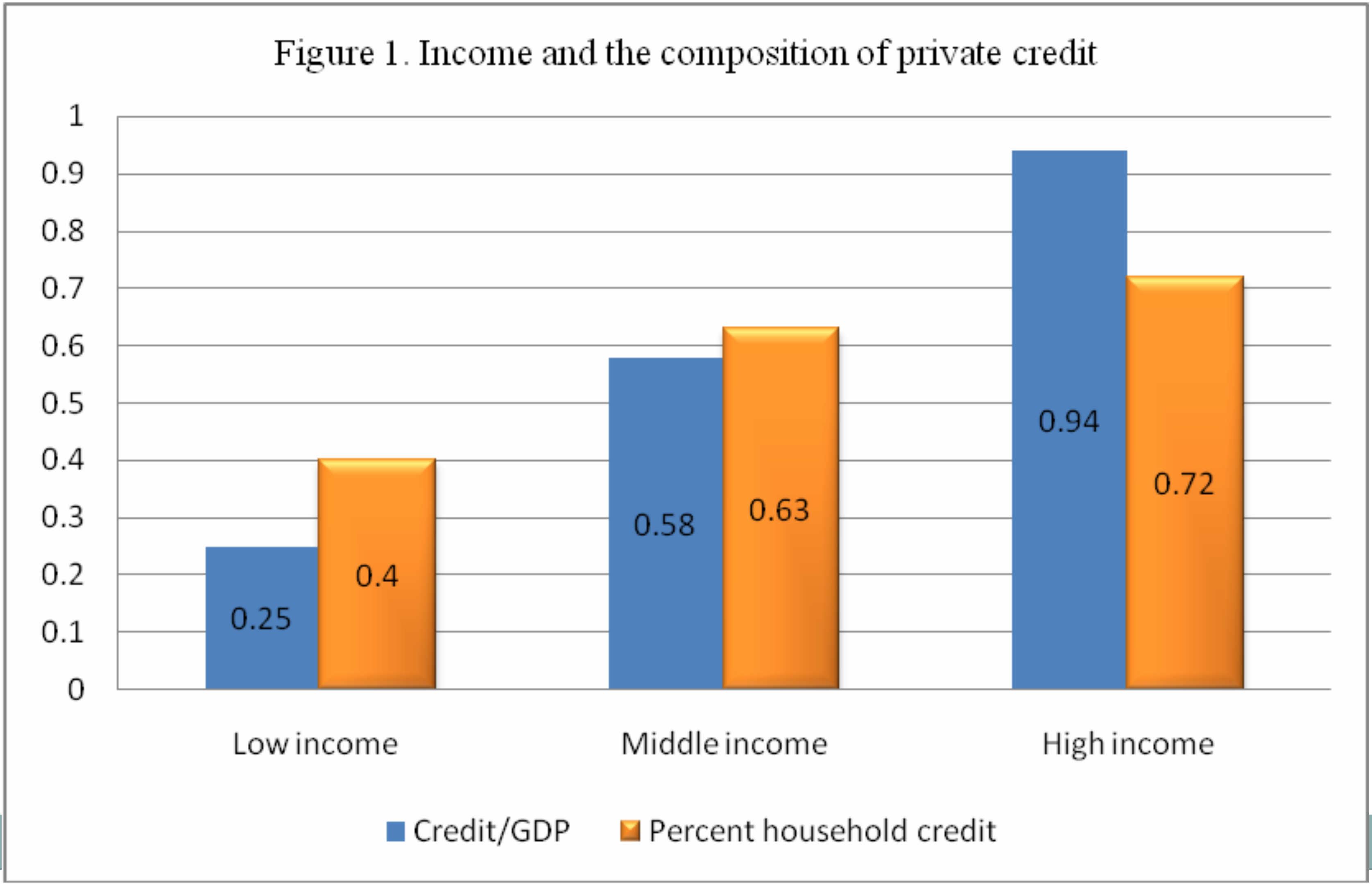
Enterprise vs. household credit

- Theoretical and empirical finance literature has focused on firm credit…
  - Theory focuses on firms in need of investment finance
  - Empirical finance-growth literature focuses on firms:
  - Even microfinance started out wanting to help microentrepreneurs
- …but 43% of bank lending goes to households
- Large variation in credit composition across countries and over time
- Does the variation matter?

Share of household credit in total bank credit



Who gets credit?



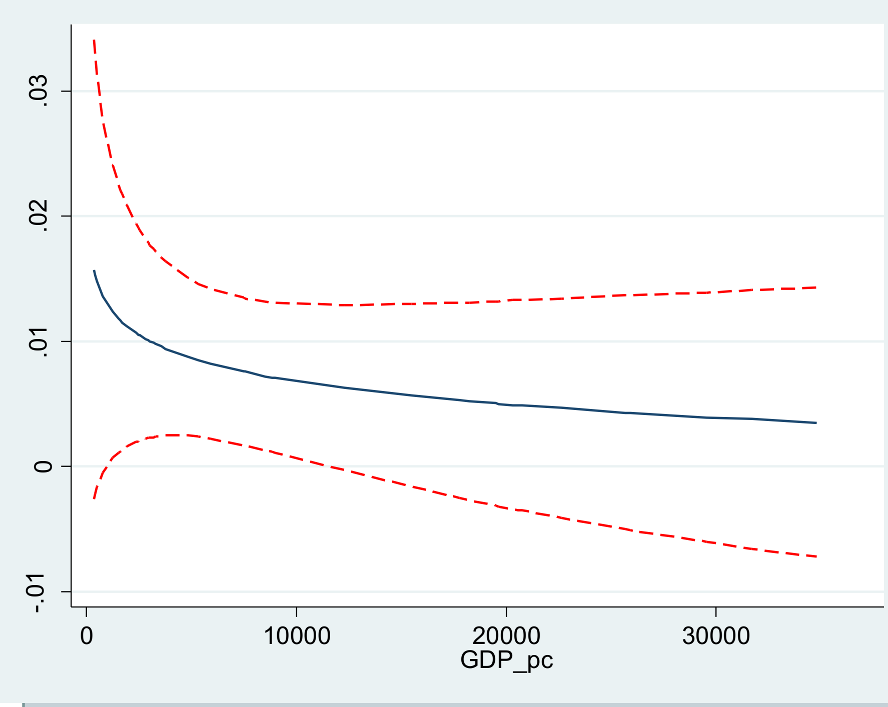
Who gets credit? And does it matter?

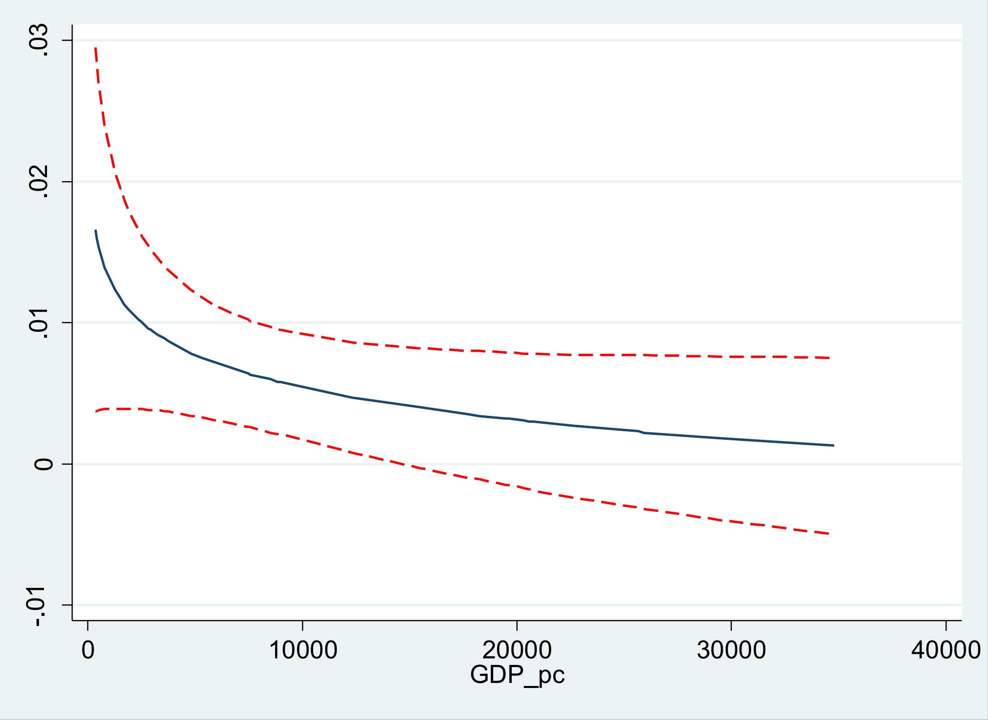
- Only enterprise component of bank lending robustly linked to economic growth
- Lending to households has no significant effect on growth (consistent with ambiguous effect predicted by theory)
- Increasing importance of household credit in total credit in high-income countries explains partly why the impact of overall bank lending in these countries is insignificant.
- Credit to enterprises, but not to households explains pro-poor effect of finance
- Beck et al. (2012)

Enterprise Credit captures more accurately finance-growth relationship

Bank Credit and growth at different levels of GDP pc

Enterprise Credit and growth at different levels of GDP pc



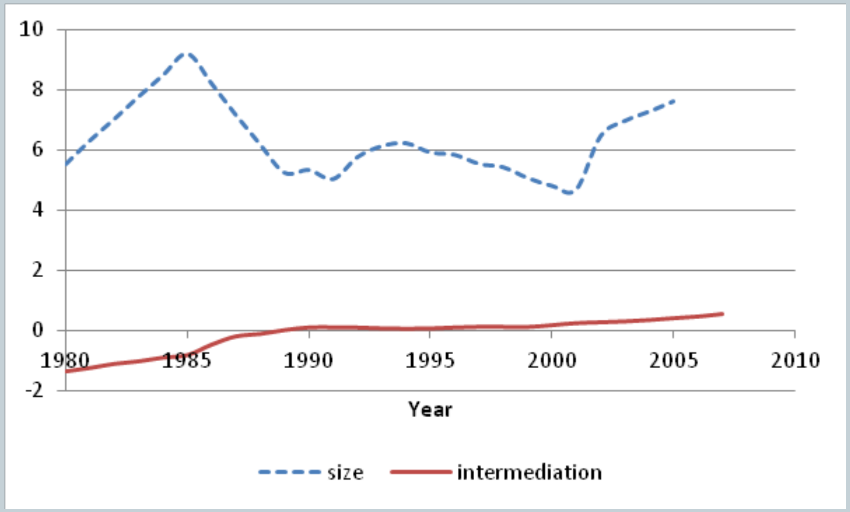


What kind of financial sector – financial intermediation vs. financial center view

- Financial intermediation or facilitator view
  - Finance as “meta-sector” supporting rest of economy
- Financial center view
  - One of many sectors
  - Nationally centered financial center stronghold based on relative comparative advantages such as skill base, **favorable regulatory policies, subsidies**, etc.

What kind of financial sector – financial intermediation vs. financial center view

- Private Credit to GDP vs. Value added of financial sector in GDP

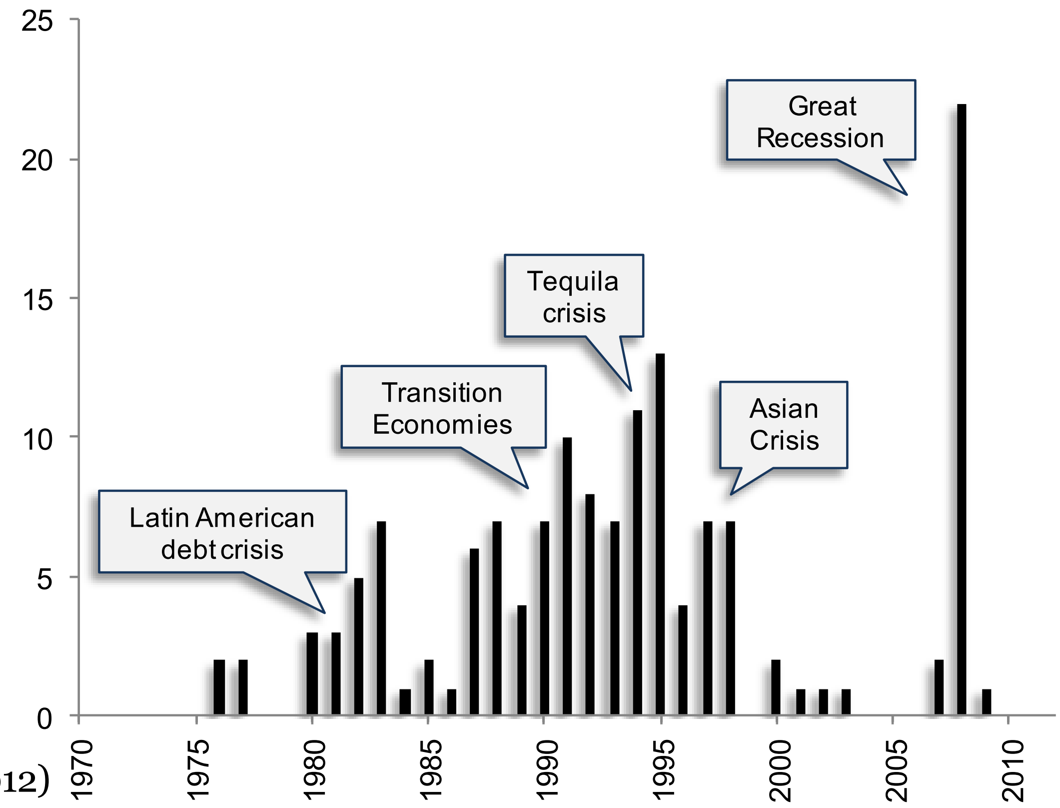


- Long-term: intermediation matters, not sector size
  - Higher growth and lower volatility
- Short-term: size is associated with higher volatility in high income countries, intermediation with higher growth in low-income countries
- Kneer (2013a,b): evidence for brain drain from skill-intensive industries to financial sector

Credit cycles – often based on asset price cycles

- Credit expansion based on explicit subsidies or political encouragement (e.g. in US pre-2007)
- Credit expansion based on low real interest rates (e.g. Spain pre-2008)
- Expectation of ever increasing prices
- Expectation of private profits and socialized losses

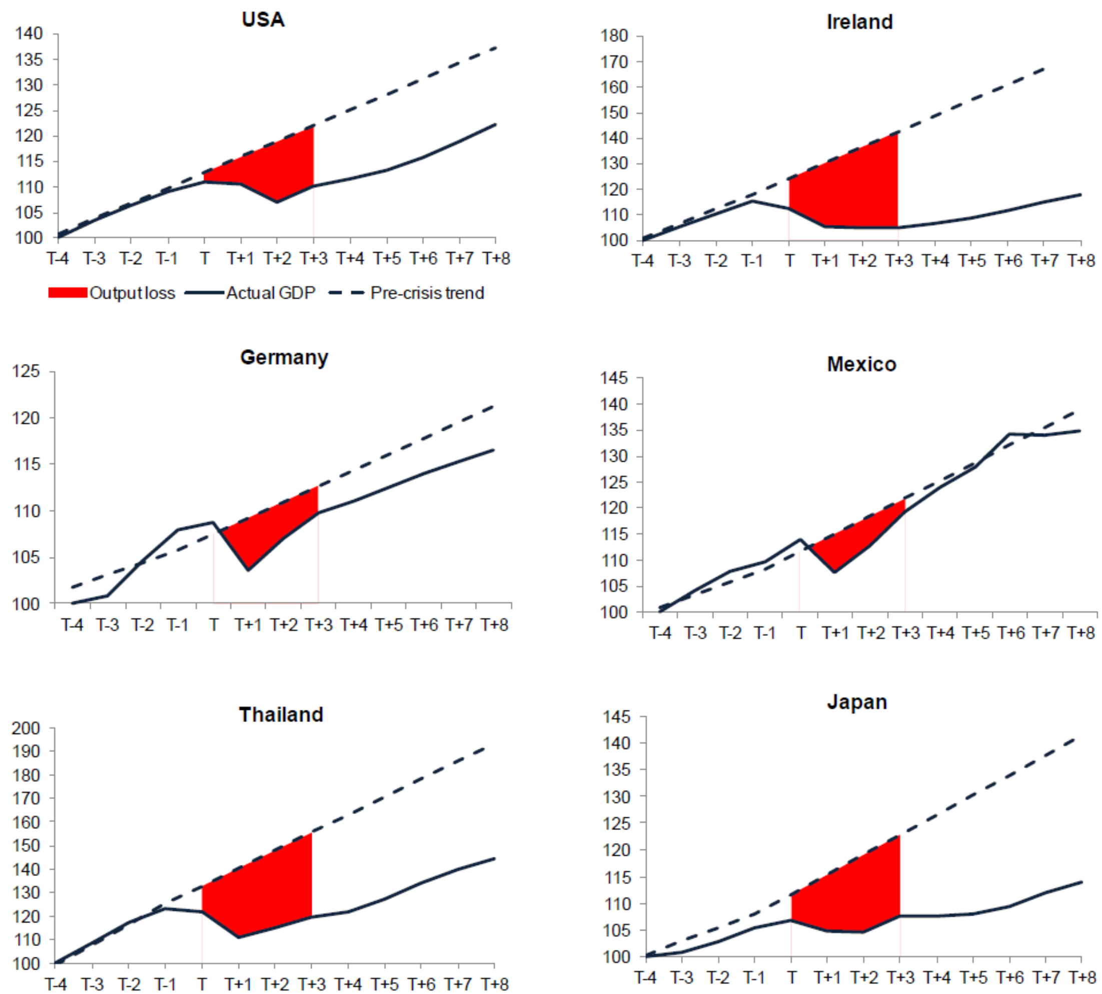
Financial crises happen often and (almost) everywhere



Source: Laeven and Valencia (2012)

With high output losses

Figure 7. Output Losses for Selected Crises Episodes 1/

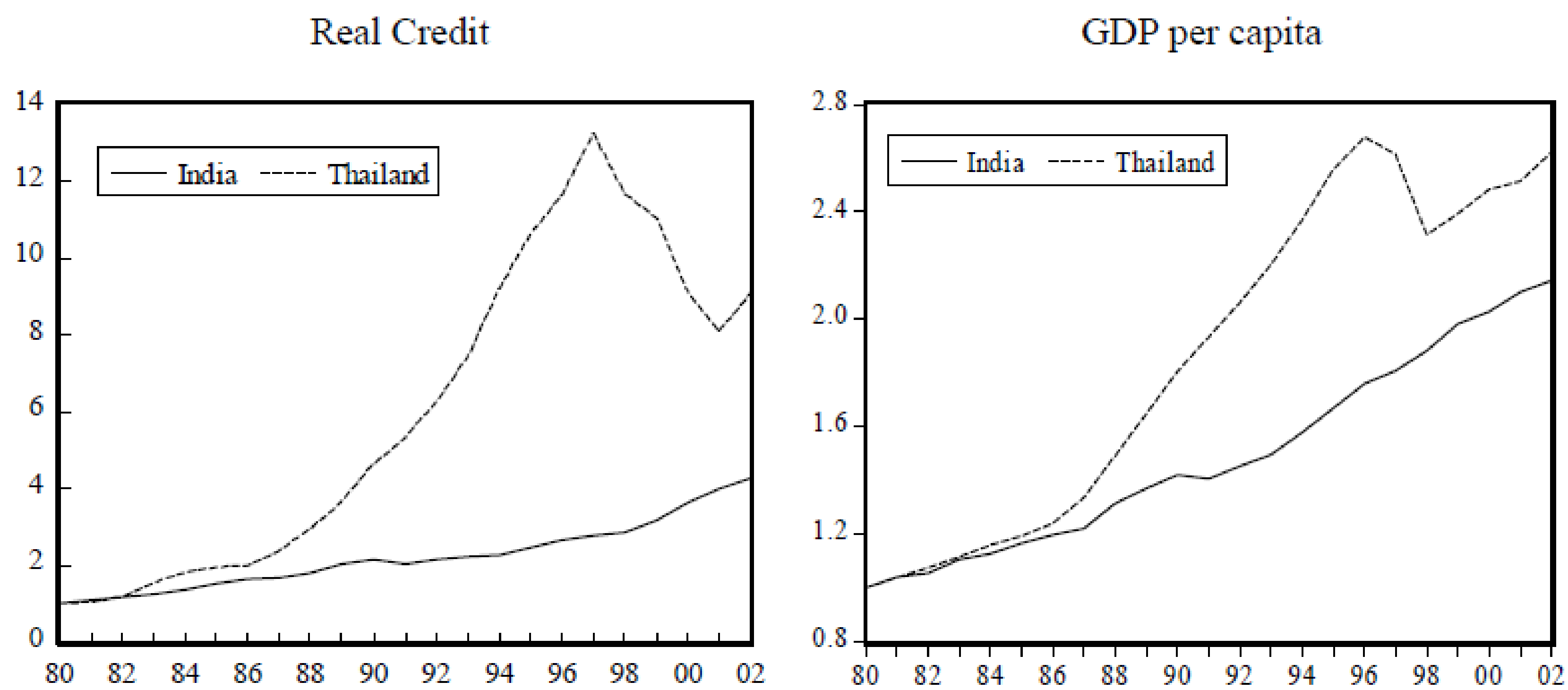


Sources: World Economic Outlook and authors' calculations.
1/Year T equals 2007 for USA, 2008 for Ireland and Germany, 1994 for Mexico, 1997 for Thailand and Japan. GDP in T-4 is set equal to 100.

Short- vs. long-term effects

- Ranciere, Tornell and Westermann (2008):

Figure I. Safe vs. Risky Growth Path: A Comparison of India and Thailand, 1980–2002



Note: The values for 1980 are normalized to one. The figures display annual credit and per-capita GDP series.

The different moments of credit growth

Estimation period	1961-2000	1971-2000	1981-2000	1961-2000	1971-2000	1981-2000
Estimation technique		OLS			FGLS	
Unit of observations		Cross-section			Non-overlapping 10 year windows	
	[1]	[2]	[3]	[4]	[5]	[6]
Moments of real credit growth:						
Real credit growth - mean	0.339 ***	0.348 ***	0.313 ***	0.156 ***	0.149 ***	0.159 ***
	0.05	*0.056*	*0.053*	*0.011*	*0.011*	*0.012*
Real credit growth - standard deviation	-0.032	-0.068 **	-0.071 **	-0.049 ***	-0.064 ***	-0.048 ***
	0.024	*0.03*	*0.029*	*0.01*	*0.009*	*0.009*
Real credit growth - skewness	-0.274 **	-0.334 **	-0.315 **	-0.333 ***	-0.244 ***	-0.268 ***
	0.129	*0.131*	*0.143*	*0.073*	*0.075*	*0.071*

What is financial development? Some remarks on measurement

- Functions of financial institutions/markets
  - Facilitating exchange of goods and services
  - Mobilizing and pooling savings
  - Assessing projects and monitoring entrepreneurs
  - Diversifying and reducing liquidity and intertemporal risk
- Financial development: more efficient provision of these services
- BUT: No data on functions
- Focus on institutions and markets as proxies
  - Monetary aggregates, bank credit/deposits (IFS), stock market data
  - Bank level data
  - User-level data
- But volume≠ efficiency/development

Financial indicators are crude proxies

- Can there be too much finance? YES
- Can financial markets be too efficient and developed? MAYBE
- But: Two different concepts
- Also: timing: finance and growth: long-term

What have we learned?

- The growth benefits of finance go hand in hand with its fragility!
- The finance and growth relationship has important non-linearities
- The importance of financial sector stems from intermediation function and from enterprise credit
- Financial inclusion is only one channel through which finance affects income inequality and poverty! And it might not be the most important one
- A poorly designed financial safety net can lead to an overexpansion of the financial system, with negative repercussions for stability and ultimately growth

Looking beyond finance and growth: A new research agenda

- What is the Goldilocks level of financial development?
  - Levels vs. changes, persistence….
  - Policies and institutions to reach optimal level
  - Trade-off development and stability
  - Trade-off in financial innovation – the good, the bad and the ugly!
- Competition and rents in the financial sector
  - Competition fosters innovation, efficiency etc.
  - BUT: monopoly rents allow investing in sunk costs
    - Information rents
    - Monopoly position to exploit scale economies - MPesa

Looking beyond finance and growth: A new research agenda (2)

- Role of government – general and specific?
  - As institution builder
  - As provider (credit vs. savings)
  - As enabler
  - As regulator and resolver
- New policy tools
  - Interaction of financial and monetary stability
  - Macro-prudential regulation (old wine in new bottles?)
  - Resolution frameworks
  - Cross-border policy coordination
- The politics of financial development
  - What drives financial sector reforms
  - The role of different constituencies and the media?
  - Sequencing of financial sector reforms

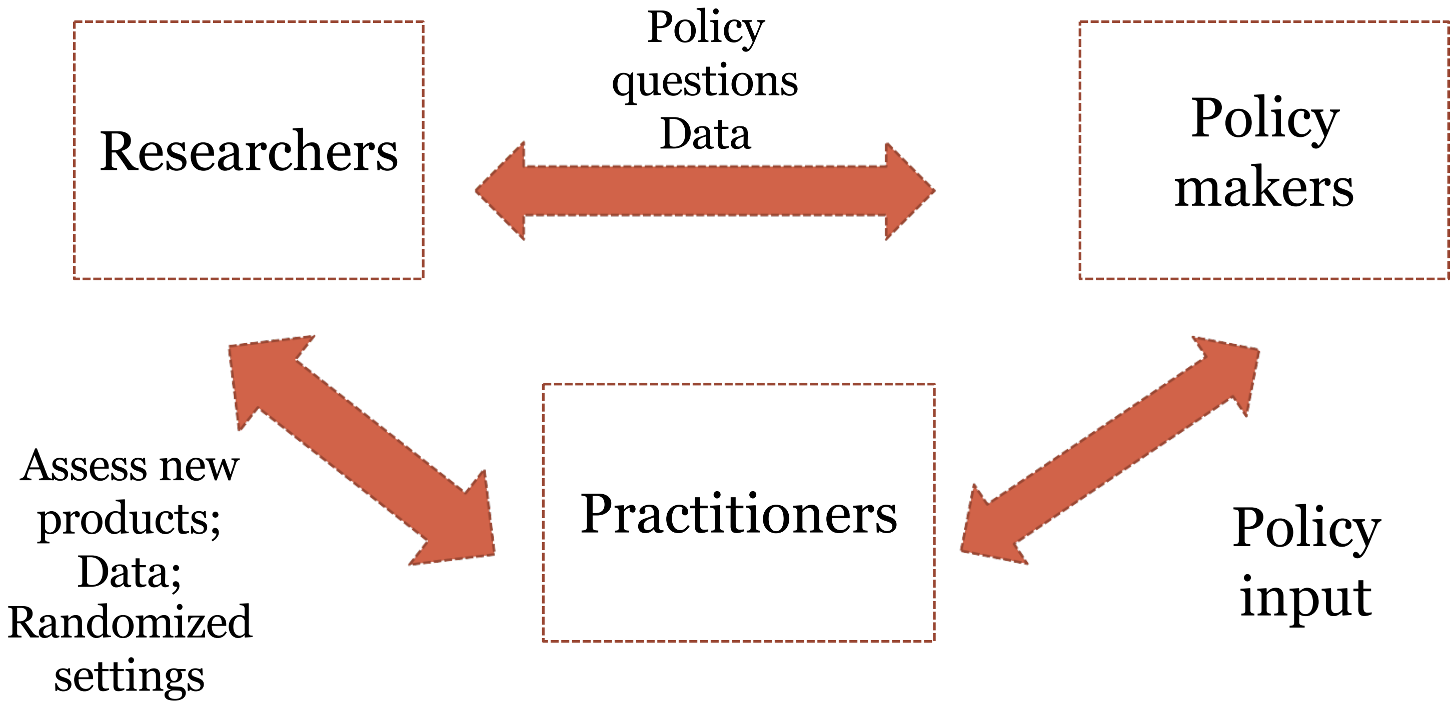
New data, new methodologies

- From aggregate cross-country to micro-data
  - External vs. internal validity
- Bank-level data: rich data source, but also limitations
  - Cross-country – comparability, crudeness of data
  - Individual countries more promising, but accessibility
- Credit registry data
  - Among the richest data sources out there (comparable: bank-specific loan and/or deposit data)
  - Allows for a variety of hypothesis testing
  - Great identification opportunity – Khwaja and Mian (same borrower to two banks)
  - Hard to get!
- Experiments
  - Can we learn from the randomistas.....

New data, new methodologies (2)

- Identification challenge
  - Instrumental variables? "Friends do not let friends…."
  - Difference-in-differences? Alternative stories; need convincing treatment and control groups
  - Shocks - most promising, but not always there
- Not all tests are causal; not all interesting tests can be causal!

Looking forward



Thank you

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