

(What new research tells us about)
How microfinance really works

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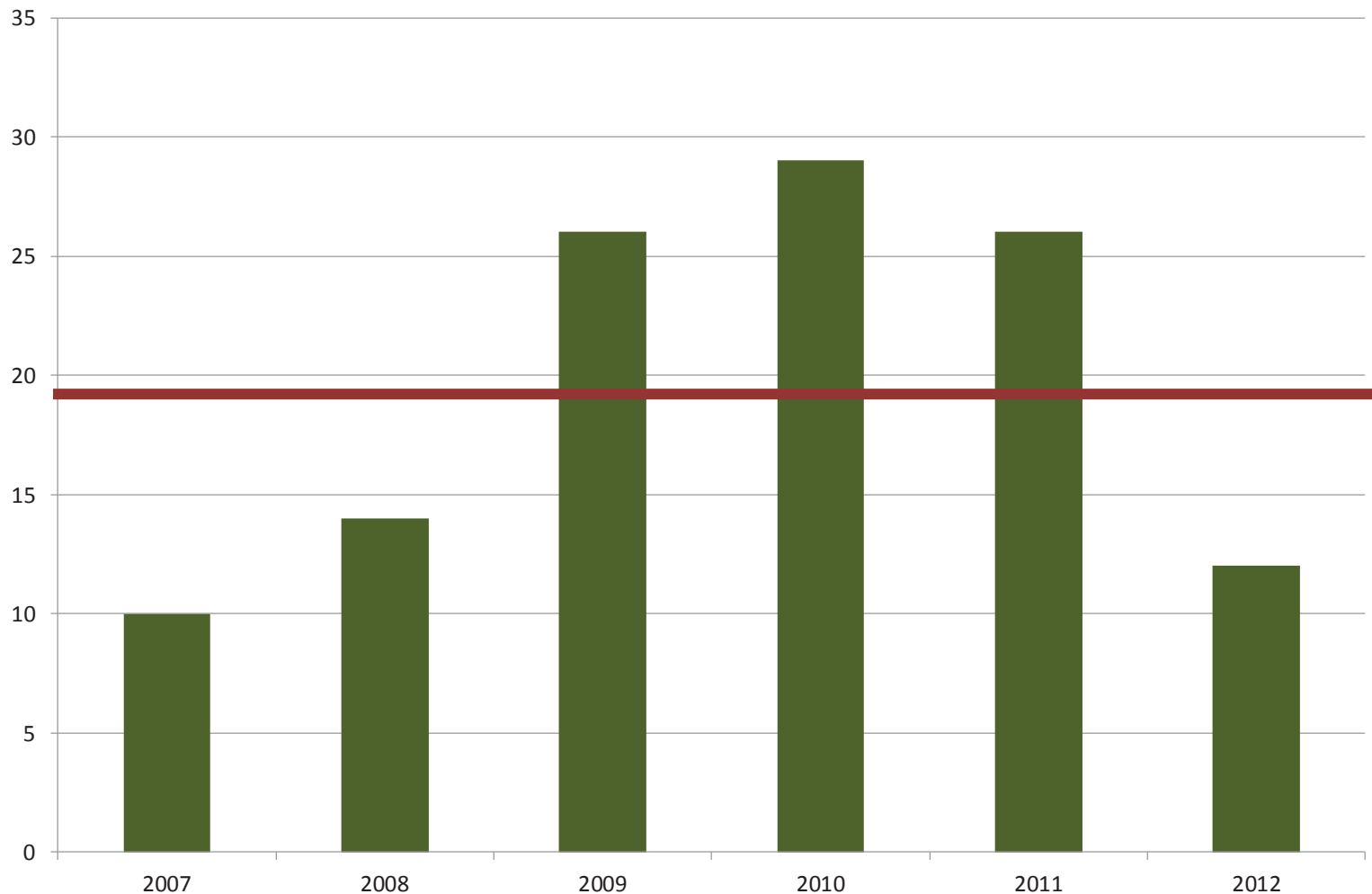
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CERMi: 117 working papers (2007-12)



Selected CERMi topics

Investment in MFIs
Subsidies and donors
Macro conditions
Ethics

Industry

Microfinance impacts and social performance
Financial performance of MFIs
Governance
Loan officers

Institutions

Microfinance contracts
Gender
Overindebtedness
Post-conflict, post-disaster

Individuals



March 2013. Happy Birthday, CERMi



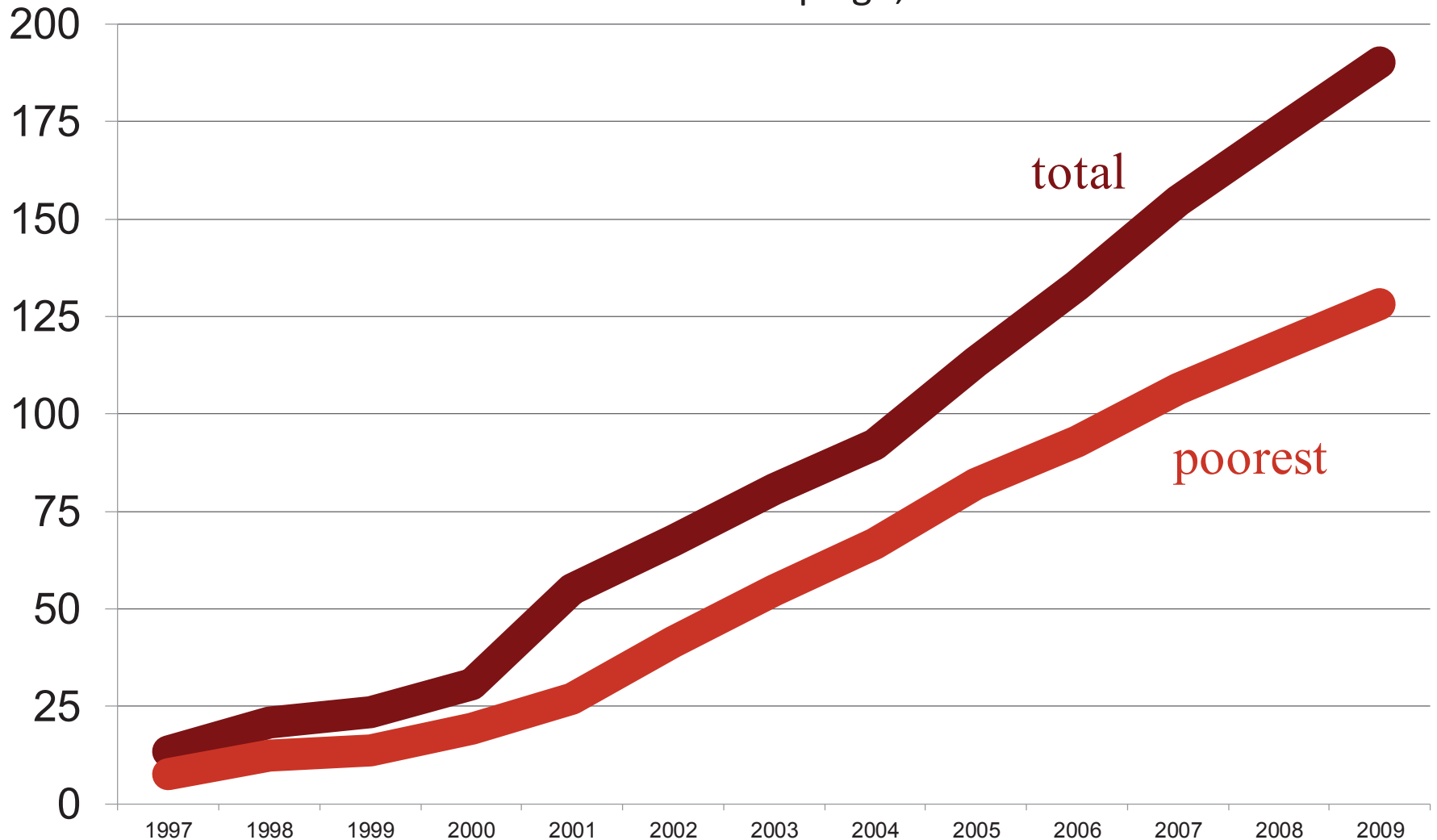
2,500,000,000 adults

Half the world

Sources: Chaia, et al, “Half the World is Unbanked.” Ch. 2 *Banking the World*. Based on Honohan. Demirgüç-Kunt and Klapper, Global Findex.

Millions of microfinance customers

Microcredit Summit Campaign, 1997-2009



3 observations

1. “Inclusive finance” is still too exclusive
2. Delivering microfinance is difficult
3. Subsidy still matters

1

“Inclusive finance” is still too exclusive

Microcredit orthodoxy

- Customers seek loans for business
- Poor population seeks to be self employed

MICROCREDIT AFRICA WORKS



UNITED COLORS
OF BENETTON.



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AFRICA

AFRICA WORKS MILLER AFRICA WORKS WELDER AFRICA WORKS

Isabelle Guérin, Santosh Kumar and Isabelle Agier

“Microfinance and Women's Empowerment: Do Relationships Between Women Matter? Lessons from rural Southern India”, **CERMi (2010)**

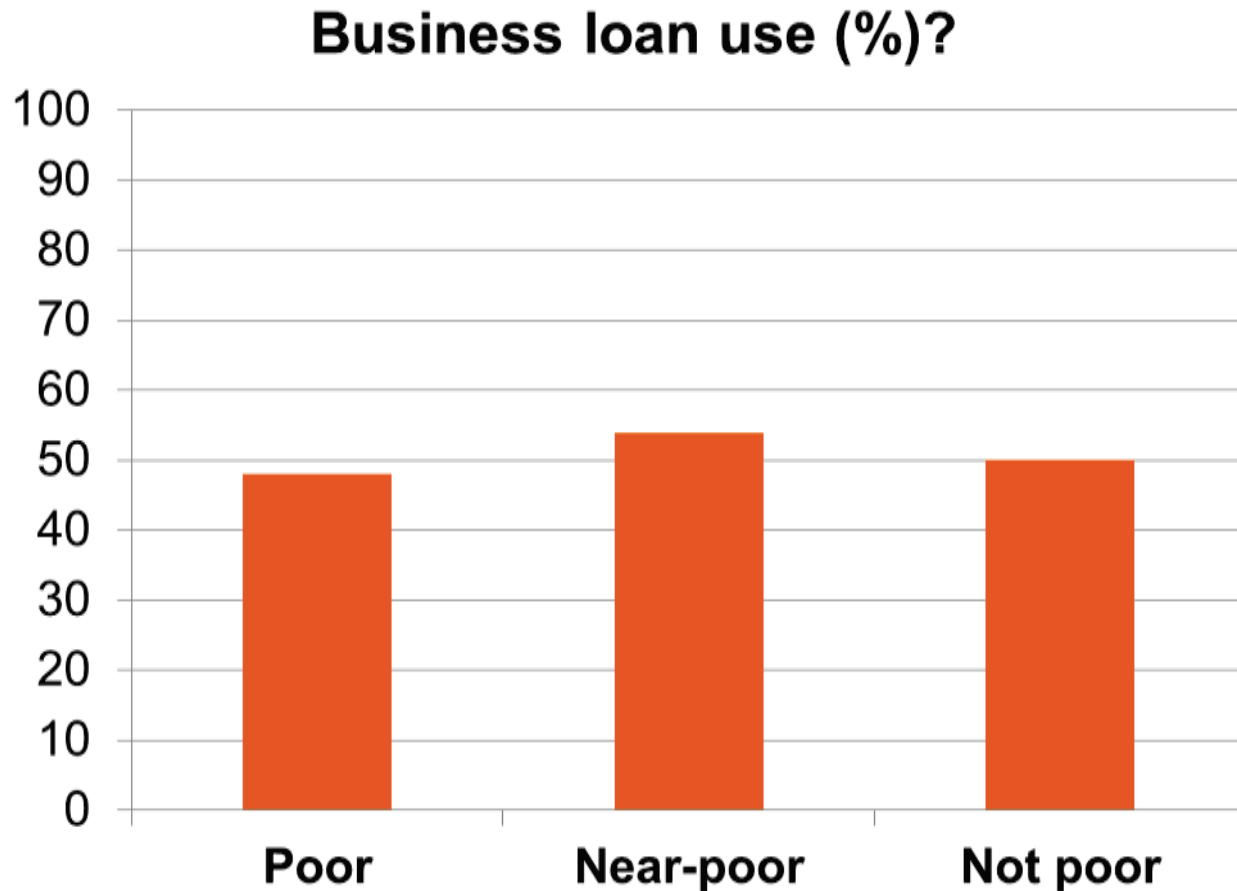
Out of 449 SHG microcredit loans reported:

Business purposes	4.5%
Health expenditure	22%
Children's education	16%
Housing	14%
Ceremonies	15%
Repaying other debt	12%

“Not only are few women self-employed, but the remainder are rarely interested in starting a business, as they are very much aware of the risks.”

Are most loans for business investment?

Evidence from **Indonesia**



Don Johnston and Jonathan Morduch, *The Unbanked: Evidence from Indonesia*. *World Bank Economic Review* 2008.

Are most loans for business investment?

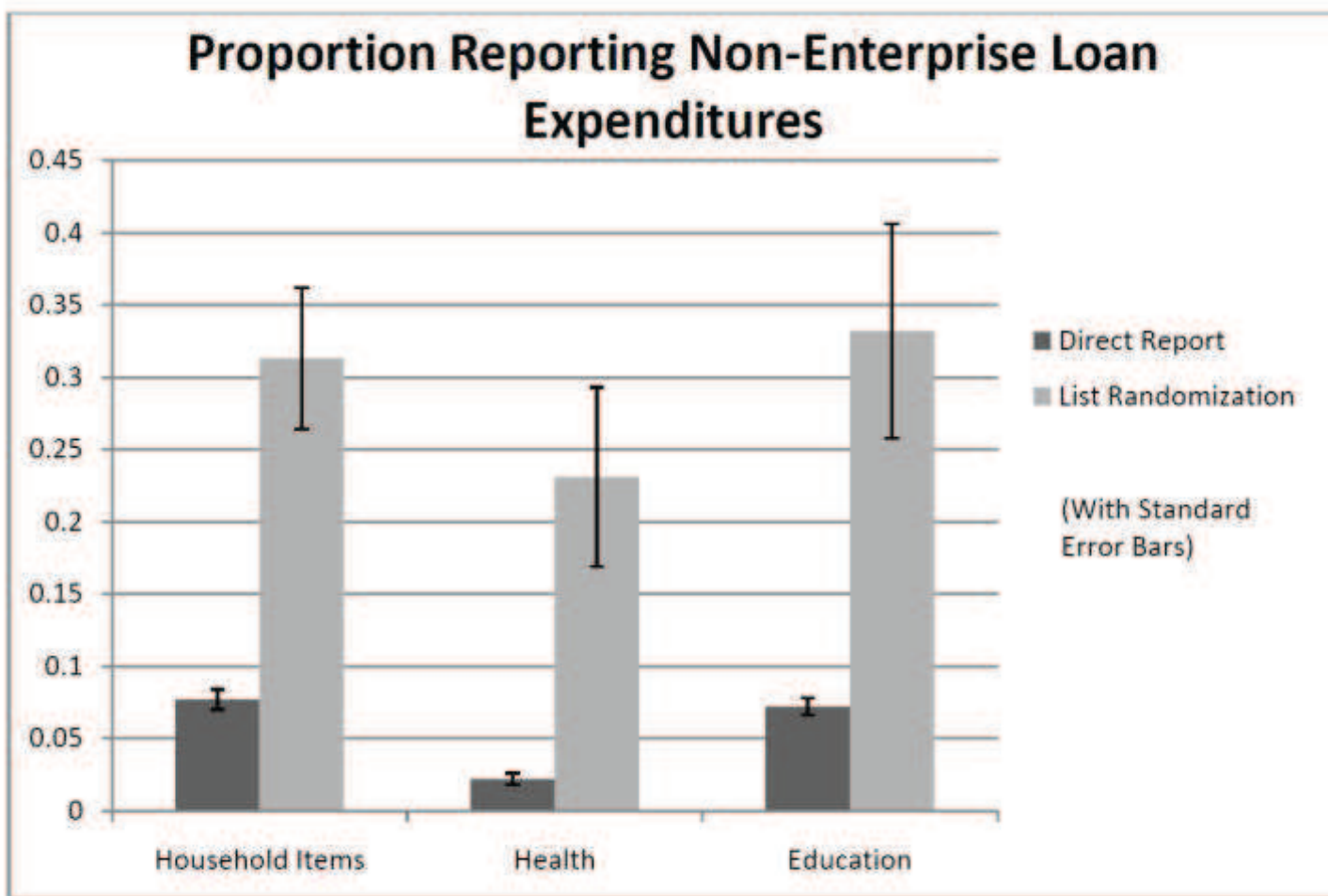
Evidence from **Mongolia**

About **half** of all microcredit business loans used for household ends:

1. Purchases of household assets such as radios and large domestic appliances.
2. Paying down more expensive loans.
3. Help smooth seasonal ups and downs of consumption.

Are most loans for business investment?

Evidence from **Peru**



Dean Karlan and Jonathan Zinman. "List Randomization for Sensitive Behavior: An Application for Measuring Use of Loan Proceeds." *Journal of Development Economics*, May 2012.

Grameen Bank Innovation: Loan top-ups

- › Grameen Financial diaries (Stuart Rutherford, 2002–5)
- › Roughly **half** of loans are used in "productive" ways

Ramna's use of top-ups

Loan #	Date	Amount	Use
1	2002	\$83	Food and stocks
1 st Top up	April 2003	N/A	Grain for coming monsoon season
2 nd Top up	October 2003	\$67	Funeral expenses
3 rd Top up	May 2004	N/A	Pay down private loan
4 th Top up	December 2004	\$75	Stocks of grain, medical treatment
5 th Top up	June 2005	\$65	School fees, restock food

Source: Collins, et al. *Portfolios of the Poor*. Princeton, 2009.

Taking consumer finance seriously...

- Allows micro-lenders to serve people with **jobs**
 - hospital orderlies, nannies, cooks, factory workers, drivers, agricultural laborers, construction workers, clerks, craft workers, and others.
- Allows micro-lenders to (openly) meet the wider needs of entrepreneurs.



The Economic Impact of Expanding Access to Finance in Mexico

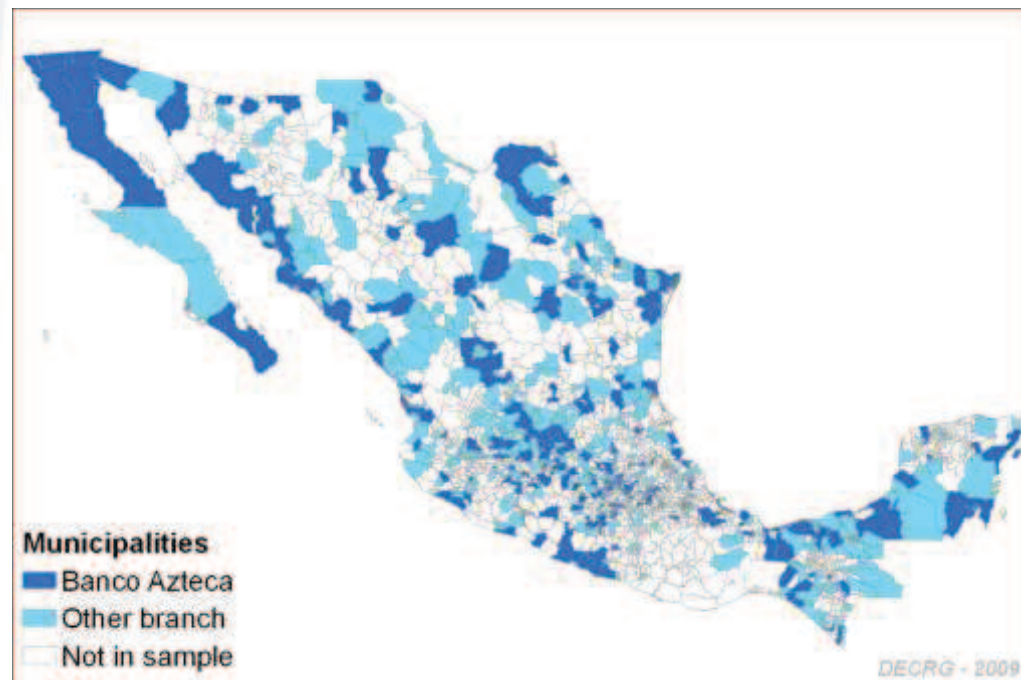
Miriam Bruhn and Inessa Love

Ch. 6, *Banking the World*, MIT Press 2012



2002: Grupo Elektra gets a banking license...Banco Azteca opens in 815 Elektra stores.

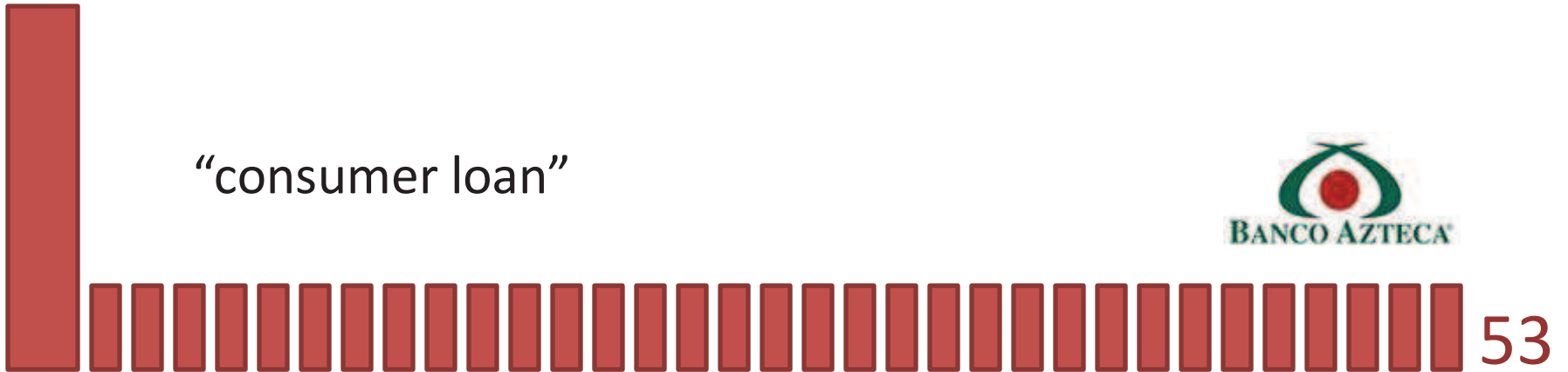
2007: “The Ugly Side of
Microlending,” *Business Week*.



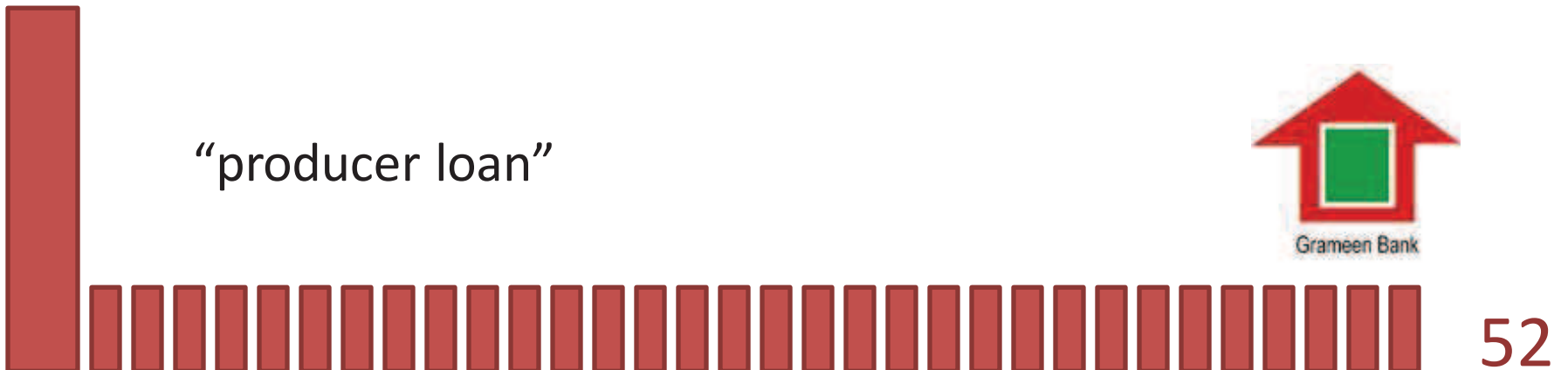
Municipalities with Banco Azteca
and other bank Branches

Installment lending

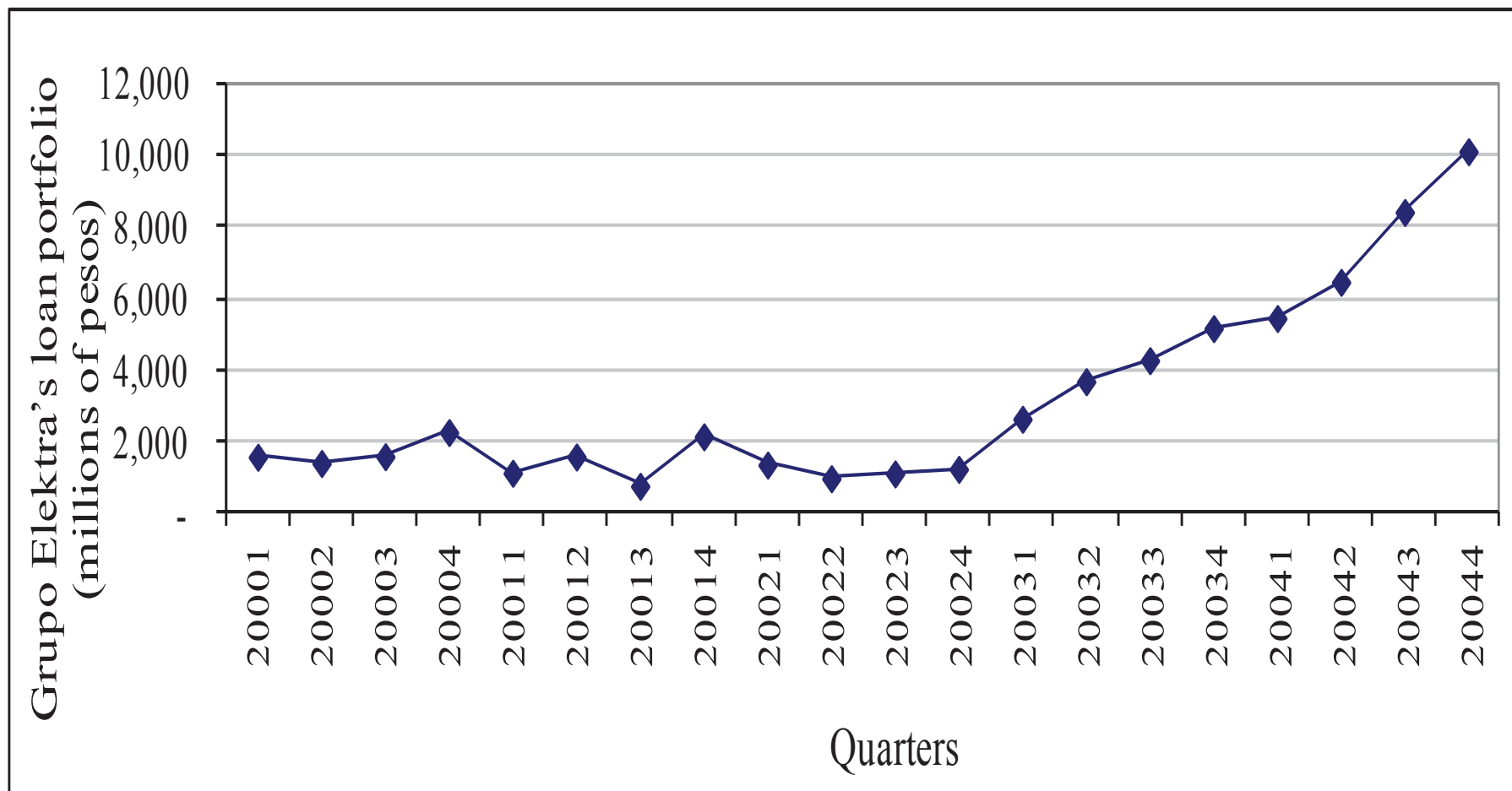
“consumer loan”



“producer loan”

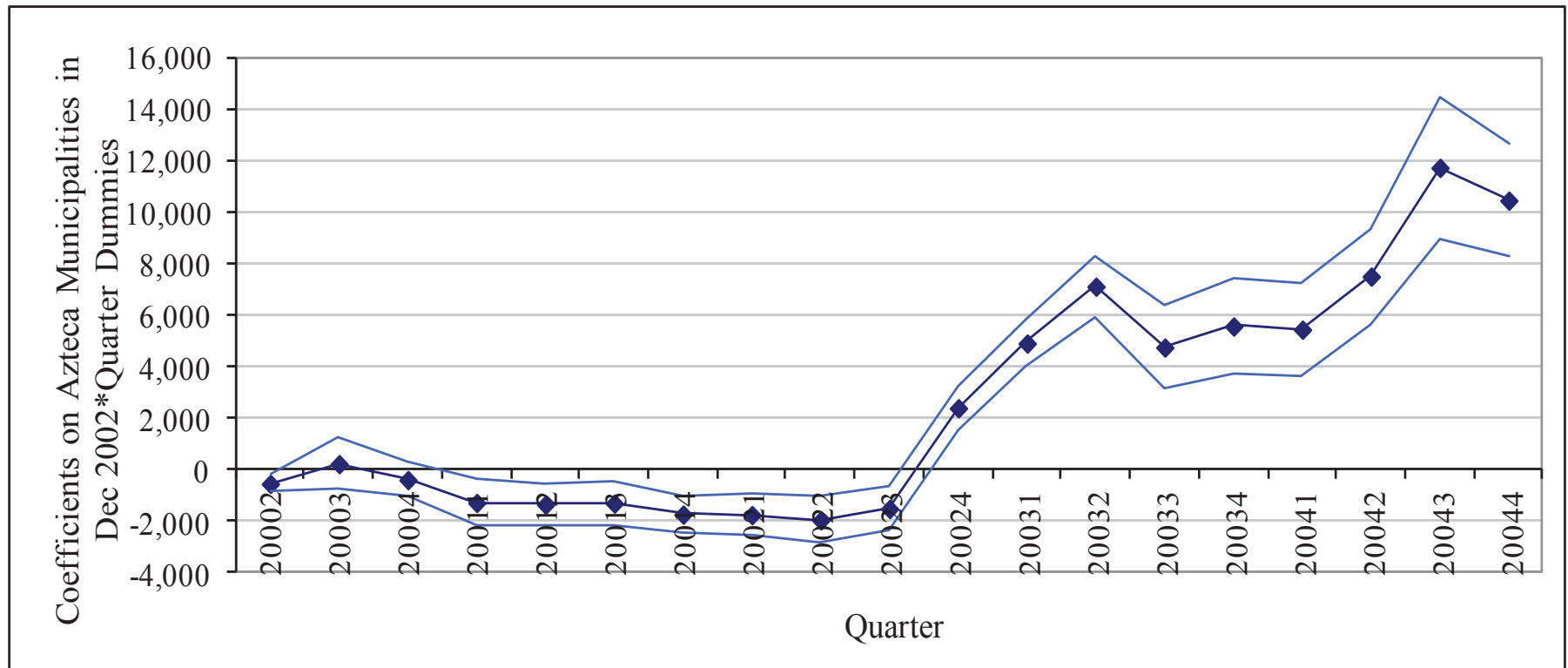


Grupo Elektra's Loan Portfolio within Mexico



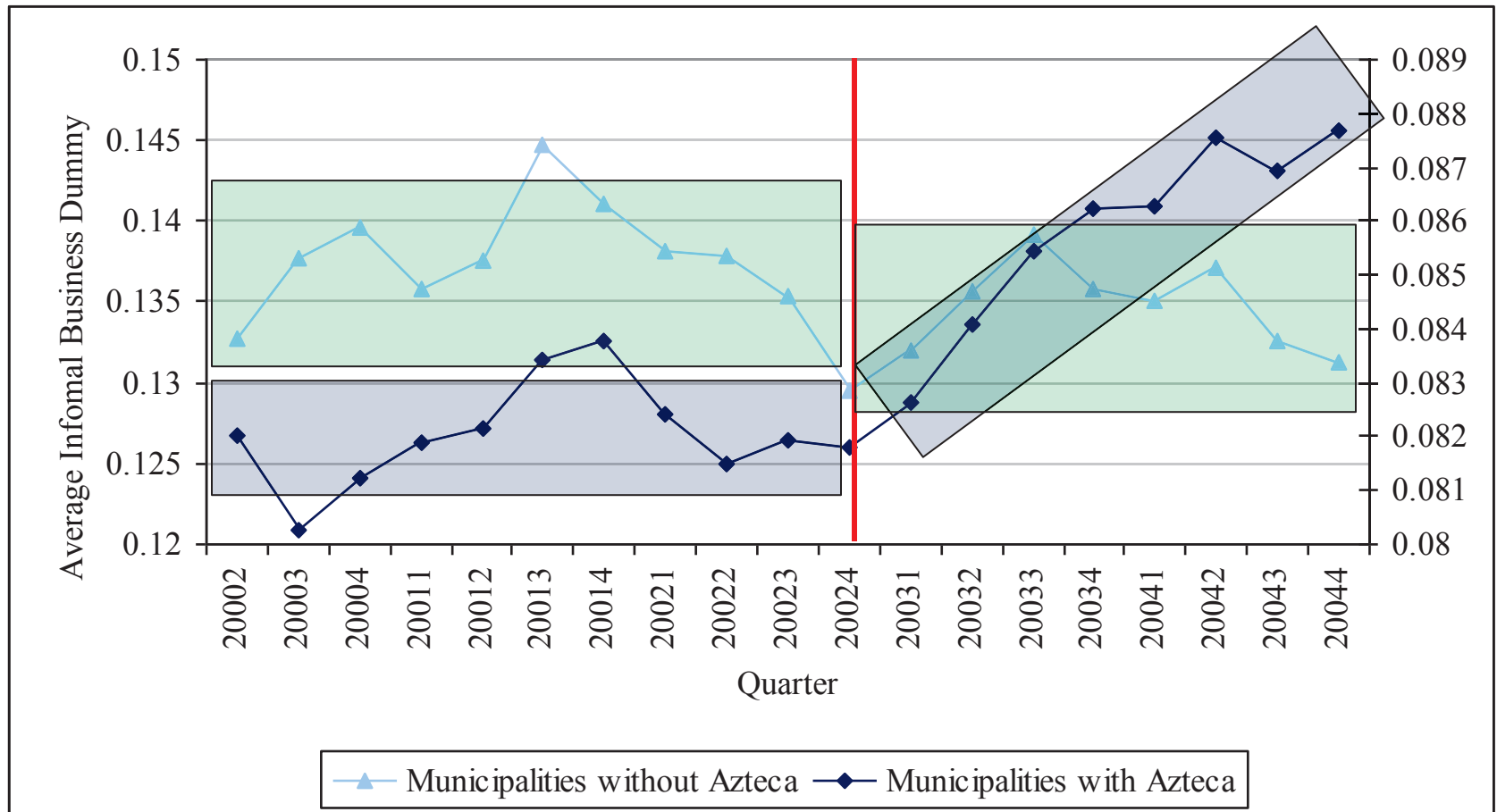
Source: Bruhn and Love, Ch. 6, *Banking the World*

Effect of Banco Azteca Opening on Savings Accounts



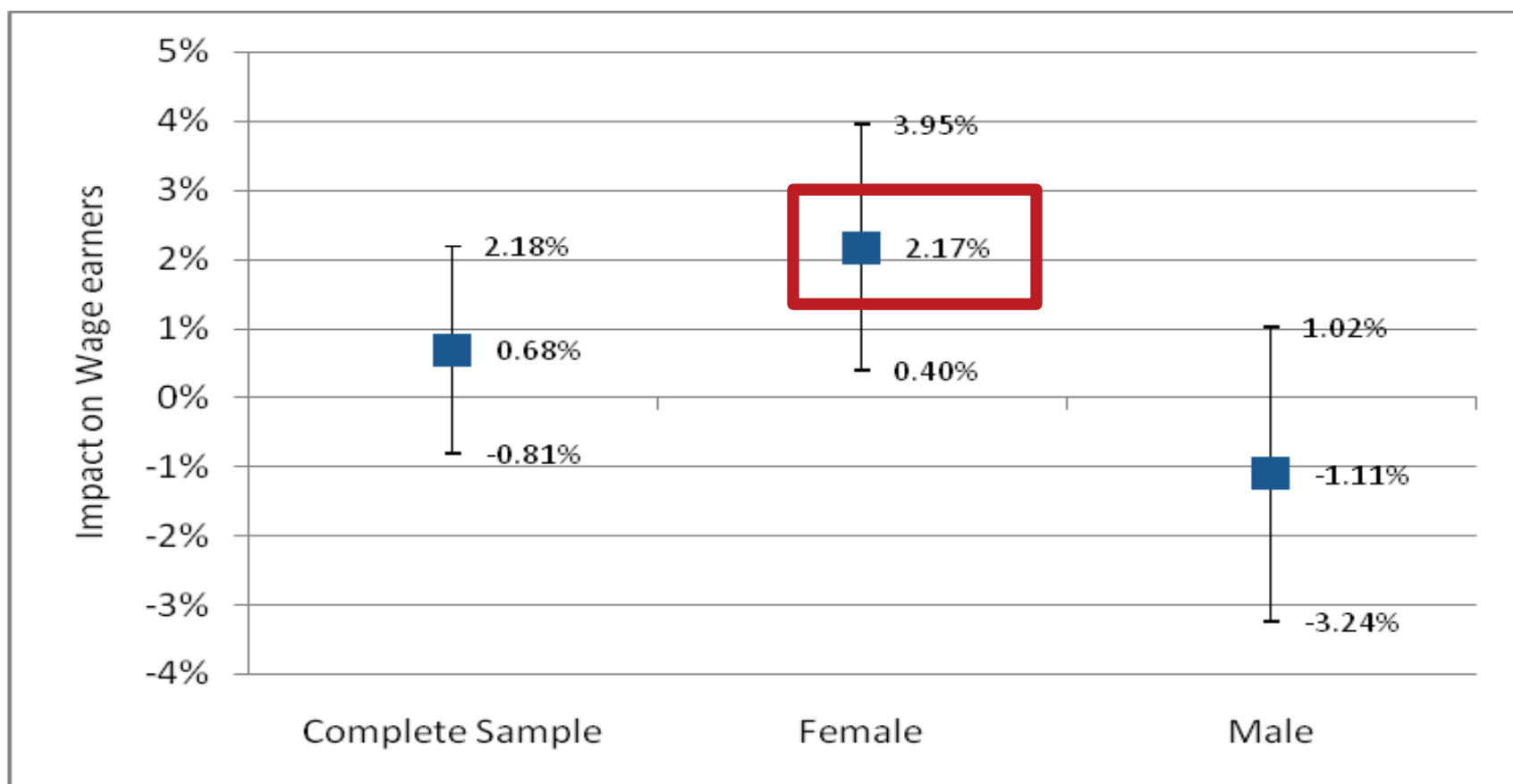
Source: Bruhn and Love, Ch. 6, *Banking the World*

Average of Informal Businesses Owner Dummy for Municipalities with and without Banco Azteca



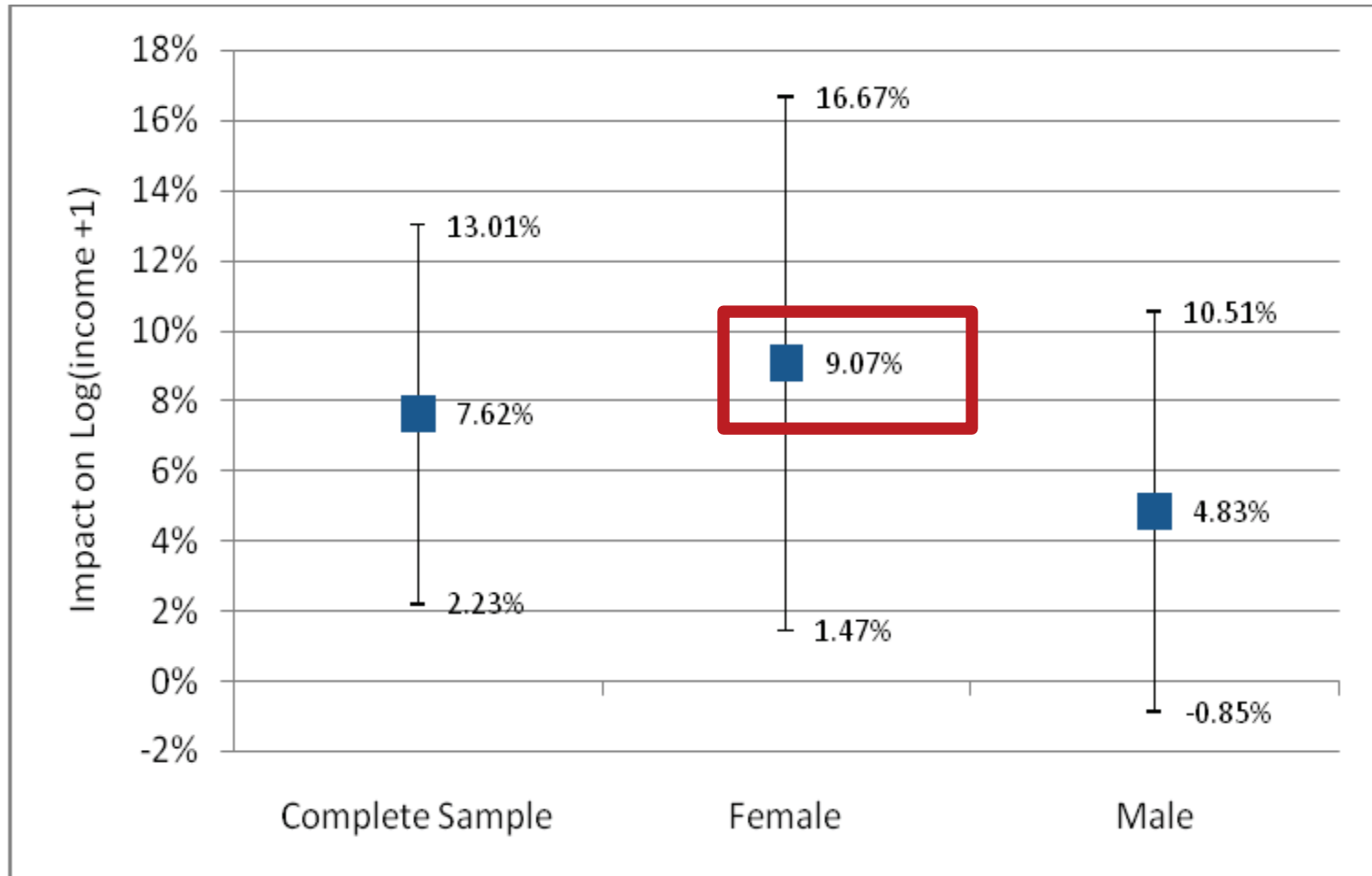
Source: Bruhn and Love, Ch. 6, *Banking the World*

Effect of Banco Azteca Opening on Wage Earners



Source: Bruhn and Love, Ch. 6, *Banking the World*

Effect of Azteca Opening on Income



Source: Bruhn and Love, Ch. 6, *Banking the World*

Sum so far

- Demand for general use funds
 - “consumer loan” used for business
 - “business loan” used for consumption
- Desire to turn small cash flows into “usefully large sums” [Rutherford]
- Ultimately, lenders lend against **household cash flows**



A CERMi perspective?

Where is gender?

Overindebtedness?

Jessica Schicks, fieldwork in Ghana

“Over-indebtedness in microfinance—An empirical analysis of related factors on borrower level,” **CERMi 2012**

“The likelihood of over-indebtedness is higher for borrowers with low returns on their investment and if borrowers use loans, at least in part, for non-productive purposes.”

2

Delivering microfinance is difficult

Microcredit orthodoxy

- Providing microcredit is **not** difficult.
- Contractual innovations allow customers to screen other customers and help enforce contracts.
- Customers are so desperate for capital that they work very hard.



Limpopo, South Africa

Photograph by Robin Saidman / VitalEdge.org

In *theory*, once the microcredit contract is written, loan officer just enforces...

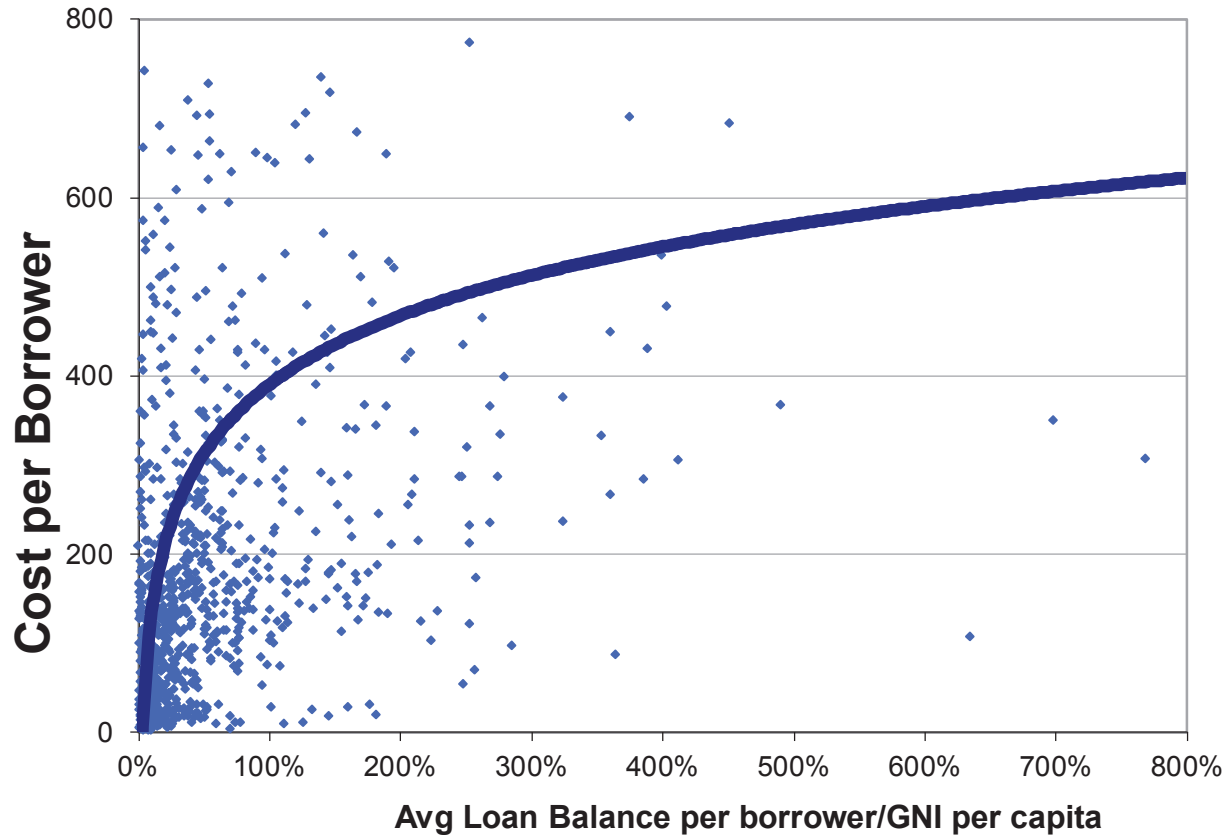


In *practice*, loan officers manage, solve problems, monitor...



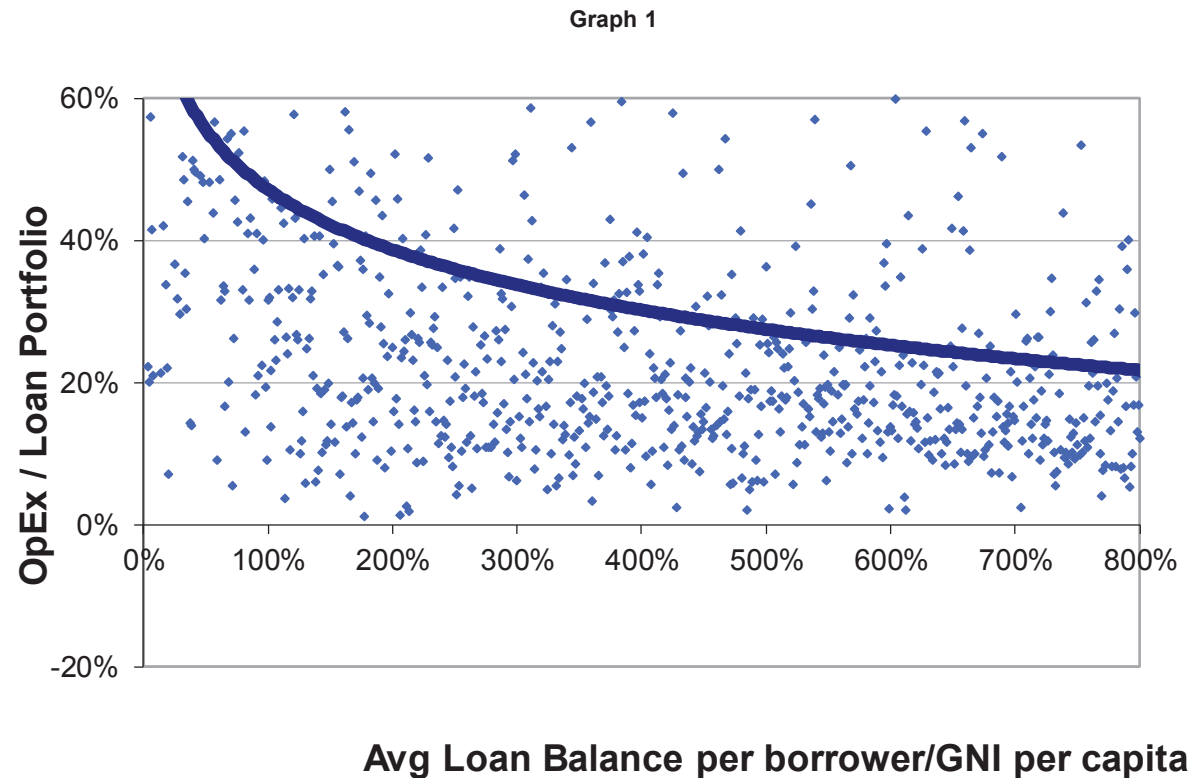
Kiva. By Shirley Fong, KF12, Angkor Mikroheranhvatho Kampuchea, Cambodia

Innovation to reduce cost per customer

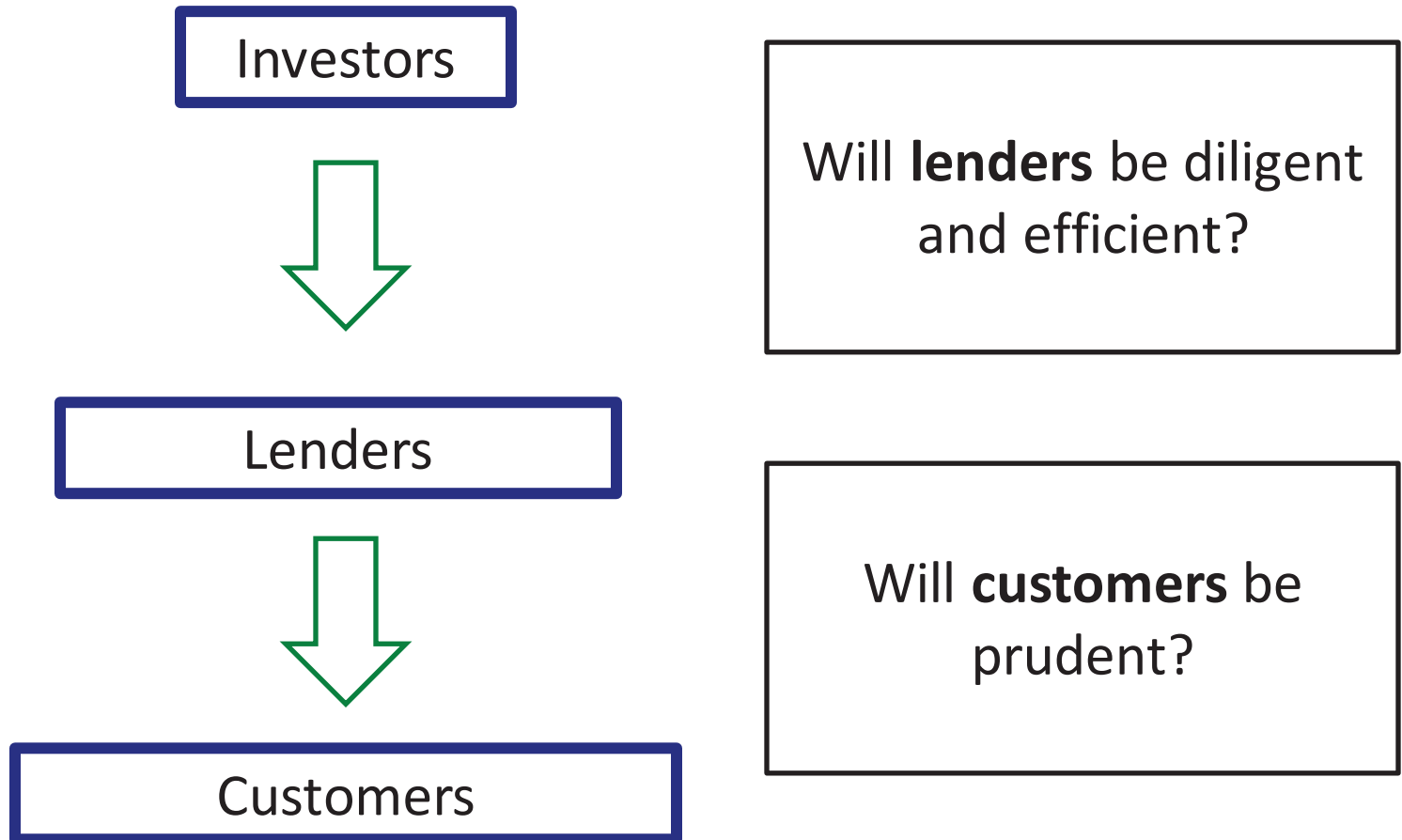


Cull, Demirgüç-Kunt, and Morduch, *Journal of Economic Perspectives*, 2009

But small transaction sizes mean high cost per unit transacted



Two layers of moral hazard



A model of moral hazard

LENDER is an entrepreneur

Competitive market

IC: **LENDER** needs incentive to work hard

Limited liability: **LENDER** has limited assets for collateral.

Risky choices

An optimal loan contract for an entrepreneur with assets A allocates project claims x_i in the success ($i=1$) and failure ($i=0$) states. The entrepreneur keeps returns s_i , and the lender collects repayments $x_i - s_i = R_i$. The lender maximizes the entrepreneur's expected returns to ensure high effort by borrowers:

$$\max_{s_i} E[s_i | p] \quad s.t.$$

$$E[x_i - s_i | p] \geq \gamma I \quad (1)$$

$$E[s_i | p] \geq E[s_i | q] + B \quad (2)$$

$$x_i - s_i \leq x_i + A \quad \text{for } i = 0, 1 \quad (3)$$

where the expected return when the entrepreneur works hard is $E[s_i | p] = ps_1 + (1-p)s_0$.

Implications

- Even if align incentives for **borrowers**, still may have incentive issues for **lenders** that prevent market efficiency
 - Management of small-scale transactions, risk, etc.
- Loan officers are key players with considerable **discretion**

Isabelle Agier and Ariane Szafarz

“Credit Officers and Loan Granting in Microfinance: Brazilian Evidence, “
CERMi 2010

“Credit officers remain by far the dominant decision-makers in microloan granting.”

What loan officers do:

- Collect field data
- Meet with applicants
- Make recommendations to the credit committee that decides loan approval/denial, loan size

Gender gap in loan size at the MFI, almost exclusively attributable to the credit officers.

Isabelle Agier and Ariane Szafarz

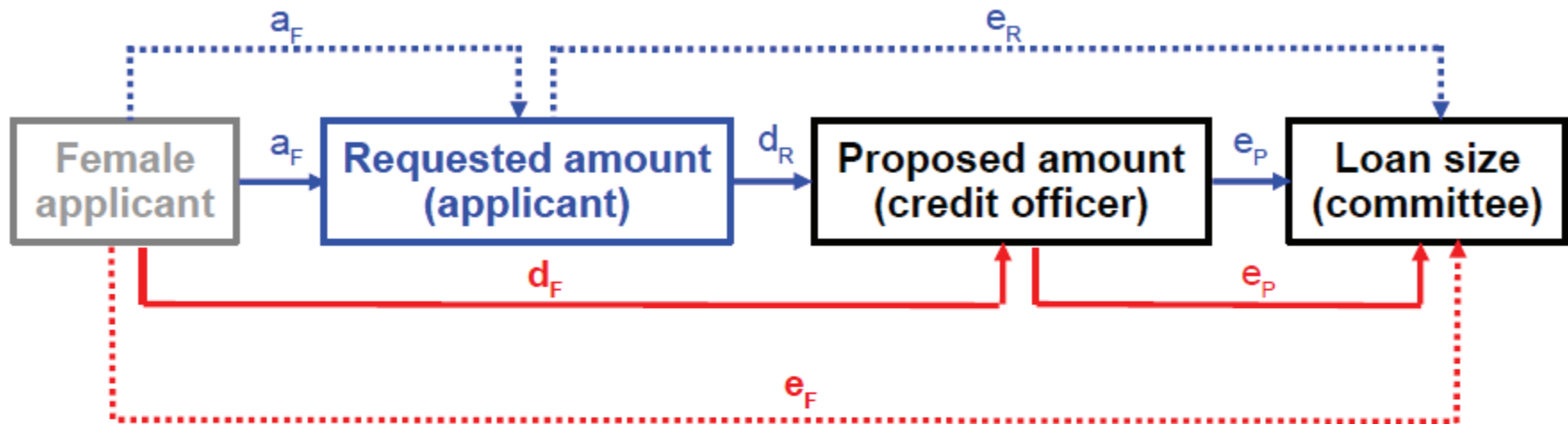
“Credit Officers and Loan Granting in Microfinance: Brazilian Evidence, “ **CERMi 2010**

Why women get
smaller loans:

67%

27%

7%



Demand effect - via credit officer ($e_P d_R a_F$)



Demand effect - directly to committee ($e_R a_F$)



Discriminatory supply effect by credit officer ($e_P d_F$)



Discriminatory supply effect by committee (e_F)

Marc Labie, P-G. Méon, Roy Mersland, and Ariane Szafarz

“Discrimination by Microcredit Officers:

Theory and Evidence on Disability in Uganda,” **CERMi 2010**

Uganda: credit officers are biased against disabled borrowers. MFI finds it costly to fully discipline.

Corporate finance problem:

Investors need to know that credit officers are being supervised, given proper incentives, etc.

Sum so far

Early microcredit literature

Innovations in incentives
between *financial
institutions* and *customers*



Emerging literature

Incentives between
investors and institutions
matter a lot



3

Subsidy still matters

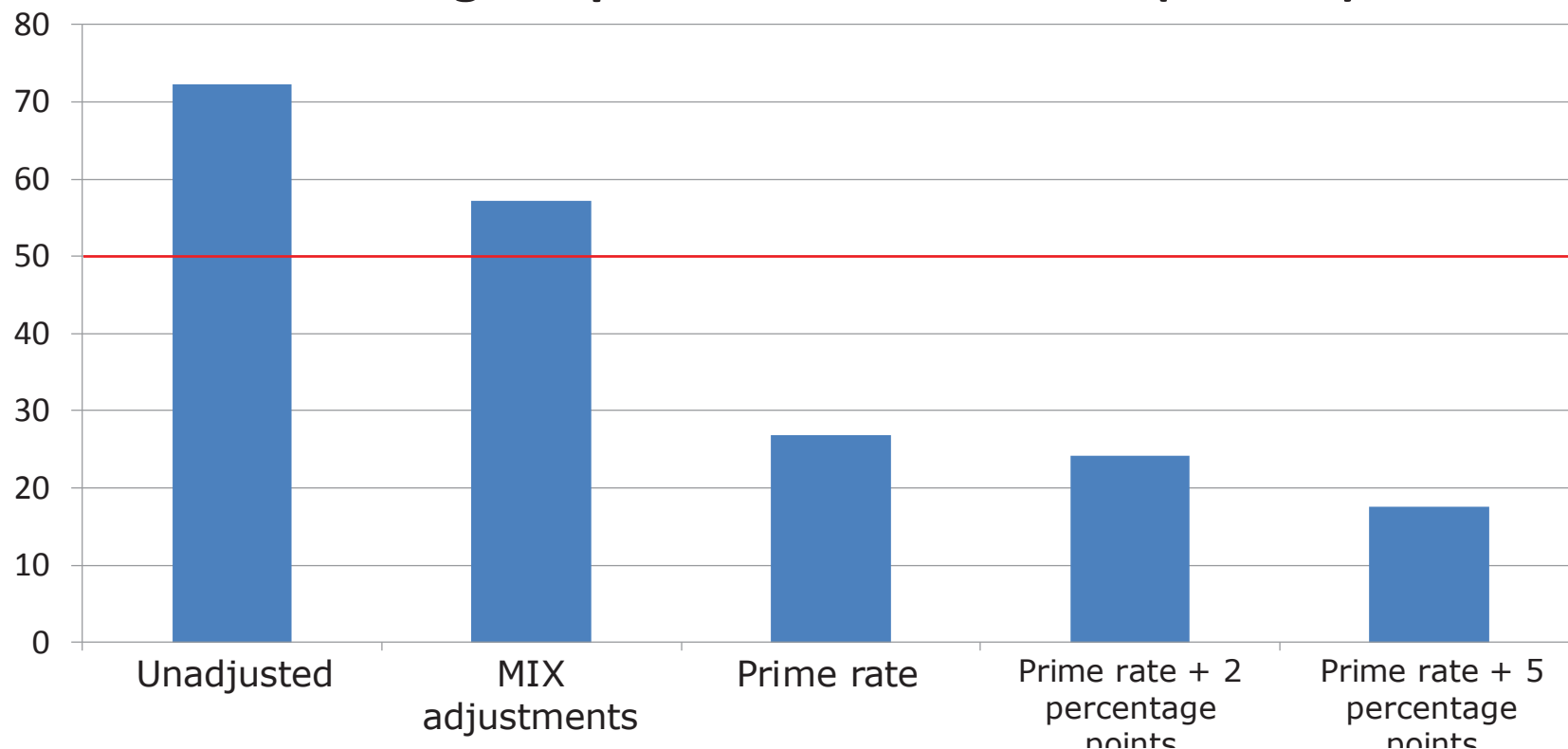
Microcredit orthodoxy

- Subsidy creates inefficiency and limits scale.
- Goal of microfinance is subsidy-free, fully commercial operation.

MFIs are more subsidized than it appears

MicroBanking Bulletin Core Data, 2002-4, 346 institutions in 67 countries

Percentage of profitable institutions (FSS > 1)



The MIX adjustments value the amount of subsidized funding at the country's deposit rate.

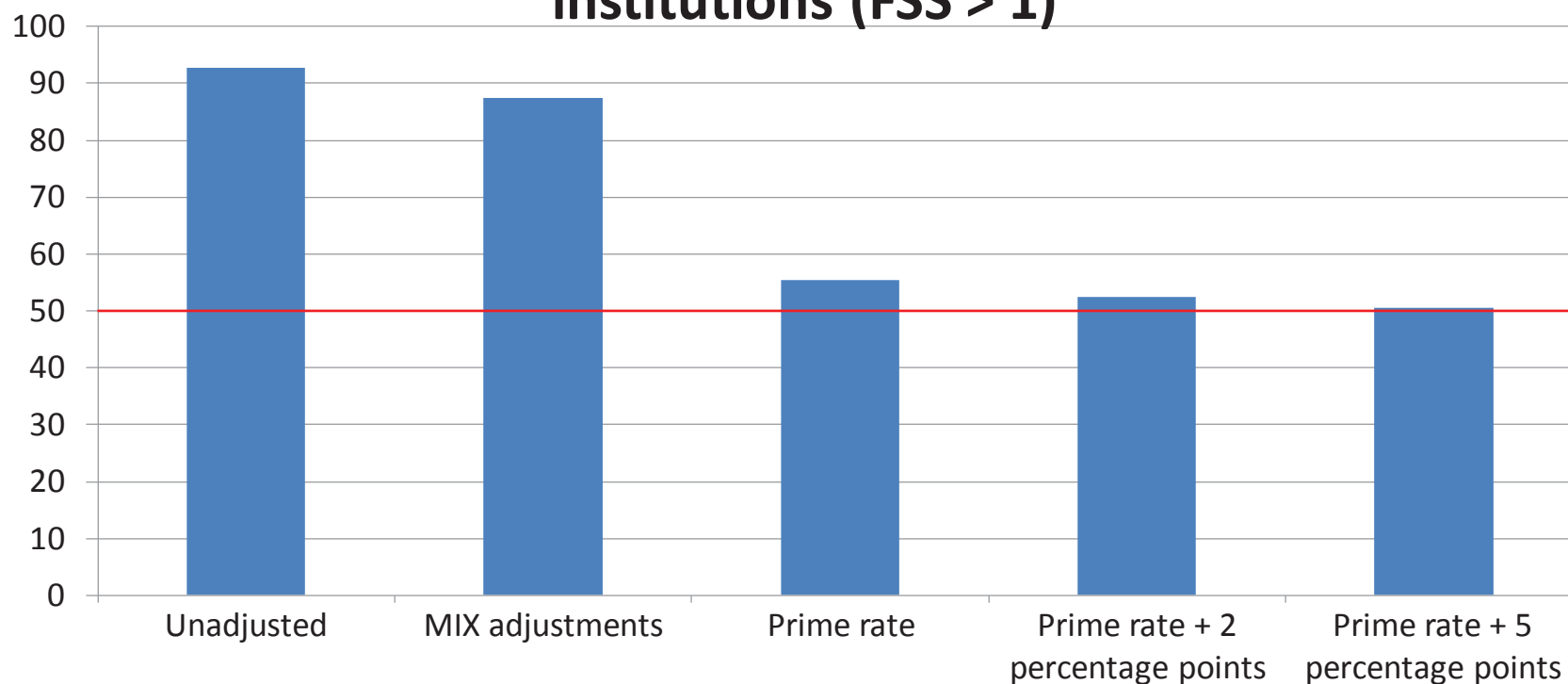
"Prime rate" refers to additional adjustments that value the amount of total equity and concessional borrowing at the country's prime rate.

Borrowers in profitable MFIs

MicroBanking Bulletin Core Data, 2002-4

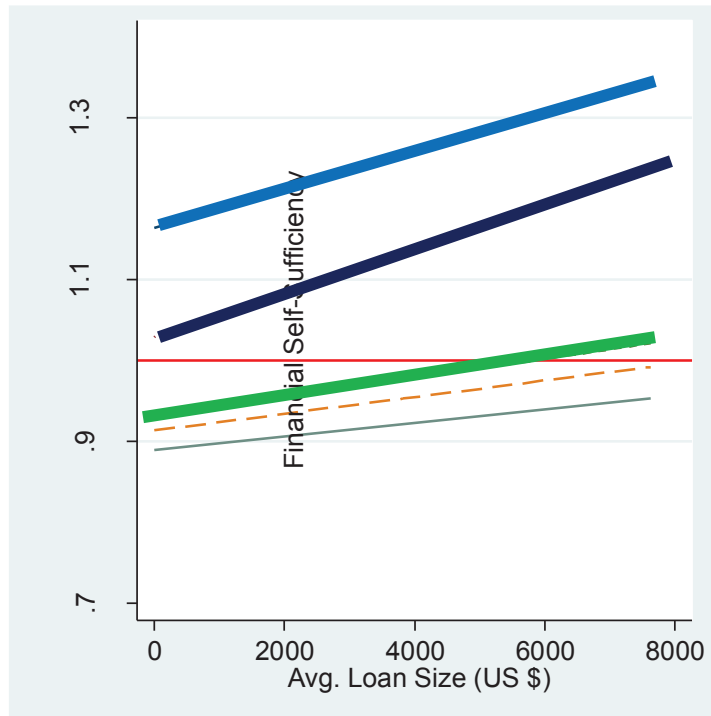
346 institutions in 67 countries

Percentage of borrowers served by profitable institutions (FSS > 1)



The MIX adjustments value the amount of subsidized funding at the country's deposit rate. "Prime rate" refers to additional adjustments that value the amount of total equity and concessional borrowing at the country's prime rate.

Fortune at the bottom of the pyramid?



Unadjusted capital cost

Capital cost = deposit rate

Capital cost = prime rate

Roy Mersland and Ludovic Urgeghe

“Performance and international investments in microfinance institutions,” **CERMi 2011**

Data from 319 microfinance institutions in 68 developing countries

Commercial investments

- Mainly related to financial performance and level of professionalisation of the MFIs.
- Less important: Targeting of women

Subsidized investments

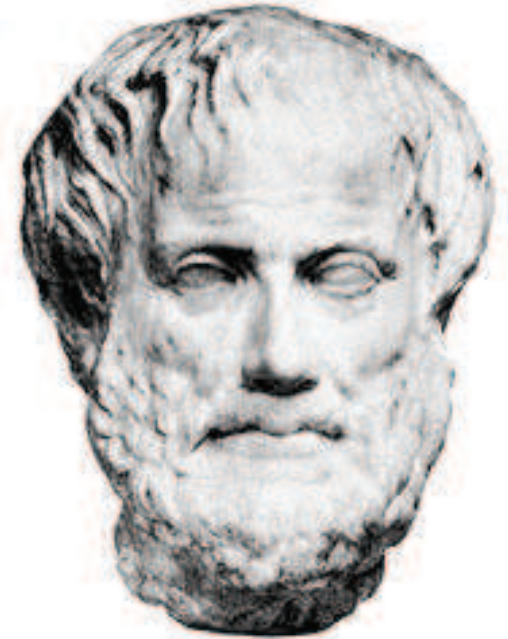
- Mainly driven by the targeting of women
- Less important: Financial performance and the level of professionalization of the MFI

Marek Hudon and Joakim Sandberg

“Towards a Theory of Fair Interest Rates on Microcredit,”

CERMi 2011

- **Aristotle** (350 BC): “true” or natural price of goods and services may differ from the market price.
- Need a clearer theory of subsidy and economics of social investment



CERMi

- How to build to **2.5 billion**?
- Escape from conceptual boxes
 - Entrepreneurial capital?
 - Emphasize money management, risk management

Challenge assumptions

Embrace possible role for subsidy

Rigorous study of households and communities

Model how organizations work in practice

imagine a better future

Happy Birthday!