



# Indian Household Finance

Committee on Household Finance

Tarun Ramadorai

# Terms of Reference: Household Finance Committee

1. To **benchmark**... household financial markets in India vis-a-vis... other major world markets...
2. To characterize... Indian households' demand in formal financial markets... **over the coming decade**.
3. To consider whether... the financial allocations... **deviate from desirable financial allocation and behavior**.
4. To evaluate the **design of new systems and the redesign of existing systems** of... regulations...
5. To assess the role of **new financial technologies and products**... in the... provision of... financial products...

# Roadmap

## International comparative analysis

- Broad trends

- Allocation of wealth

- Understanding international differences

## Indian household financial decisions

- Geographic heterogeneity

- Household behaviour

- Gains from re-allocation of household wealth

## Enabling improved household finance outcomes

- Explaining household behaviour

## Recommendations

## Appendix

# Indian Household Financial Decisions

- ▶ Four broad features visible in the All-India Debt and Investment Survey, 2012:

# Indian Household Financial Decisions

► Four broad features visible in the All-India Debt and Investment Survey, 2012:

1. High allocation to non-financial assets (gold and real estate).
2. High levels of non-institutional-source borrowing.
3. Near complete lack of pensions.
4. Low levels of insurance penetration (life and non-life).

# Indian Household Financial Decisions

- ▶ Four broad features visible in the All-India Debt and Investment Survey, 2012:

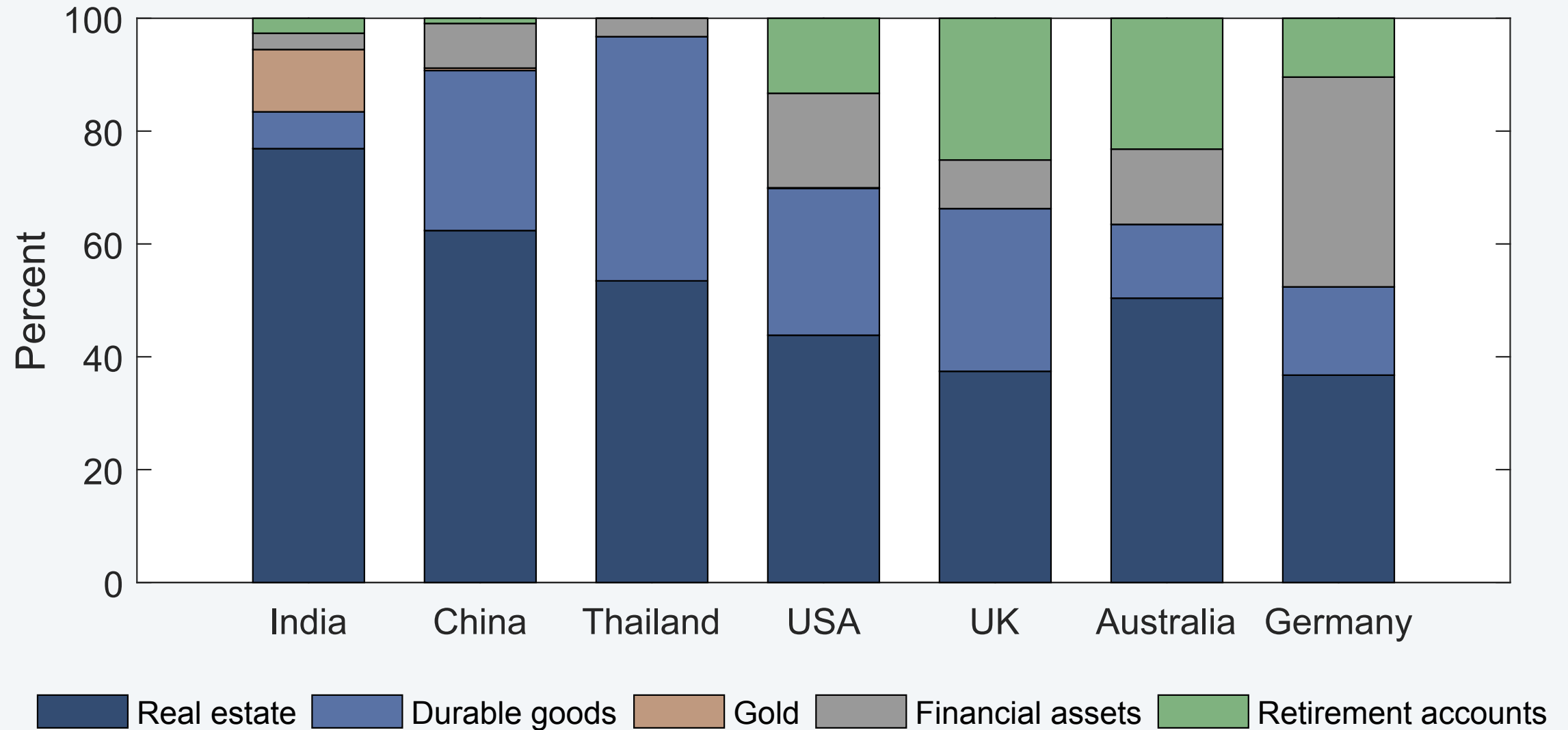
1. High allocation to non-financial assets (gold and real estate).
2. High levels of non-institutional-source borrowing.
3. Near complete lack of pensions.
4. Low levels of insurance penetration (life and non-life).

- ▶ These facts are:

- ▶ unusual in the international context, and
- ▶ difficult to rationalize using a canonical life-cycle model.

# Allocation of household assets

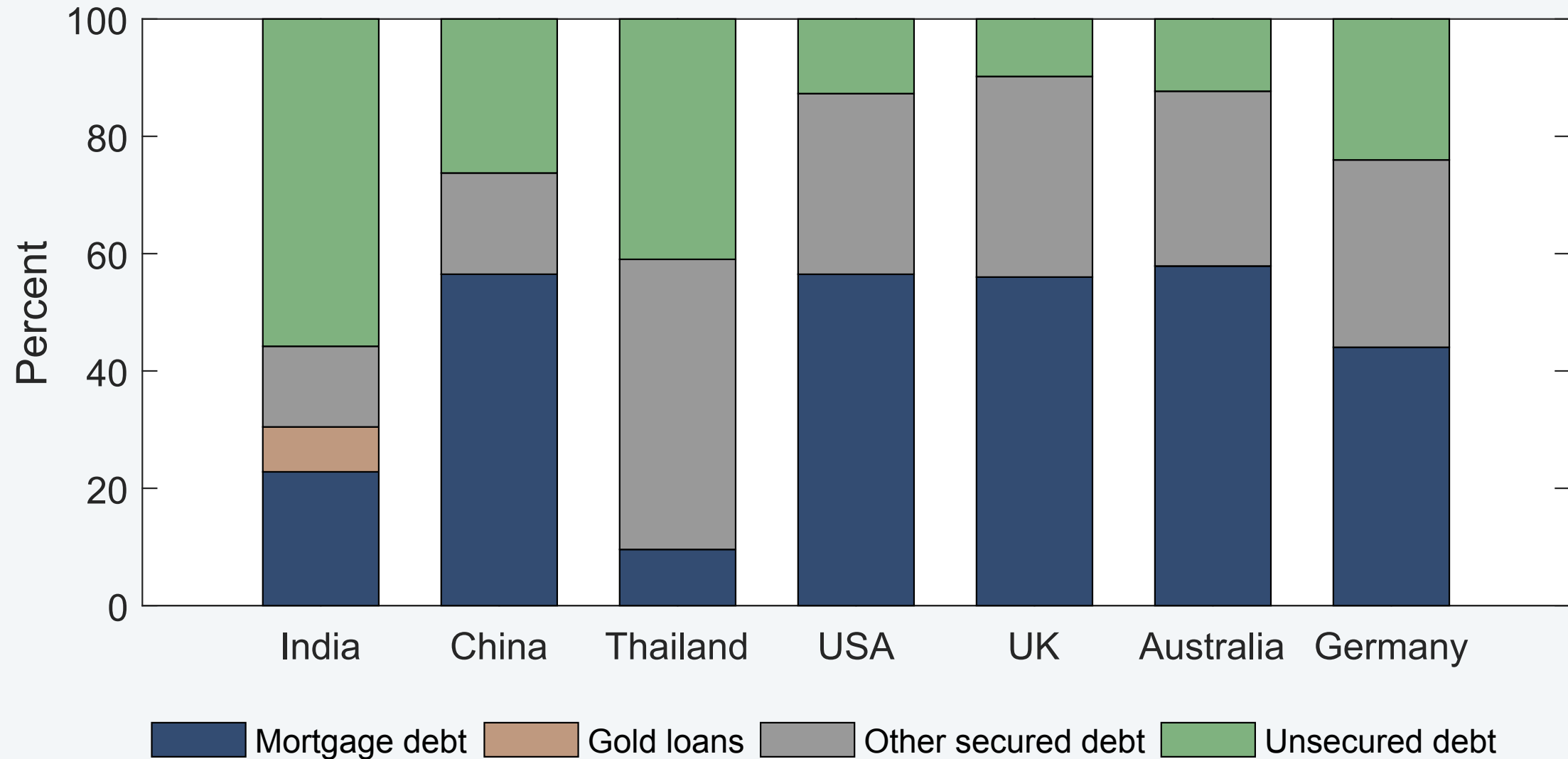
## Equal-weighted average



- ▶ The average Indian household holds 77% of total assets in real estate, 11% in gold, 5% in financial assets, and hardly any retirement assets/pensions.

# Allocation of household liabilities

## Equal-weighted average

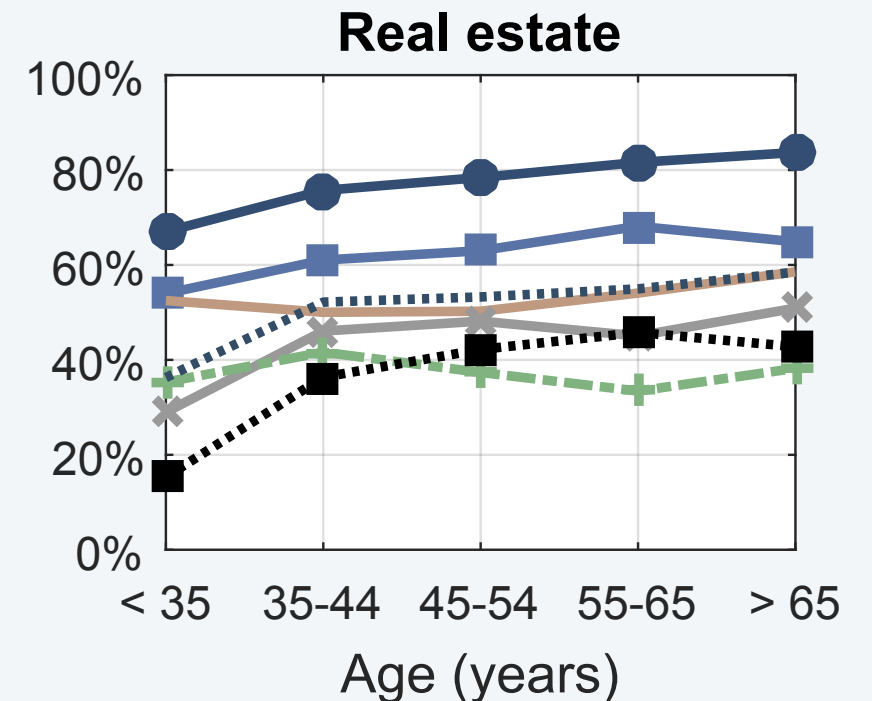
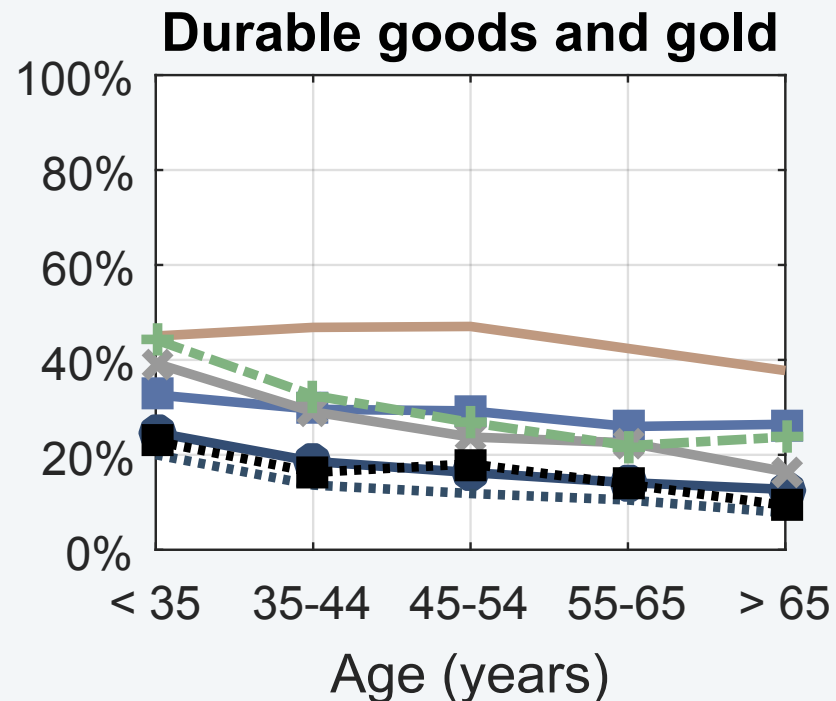
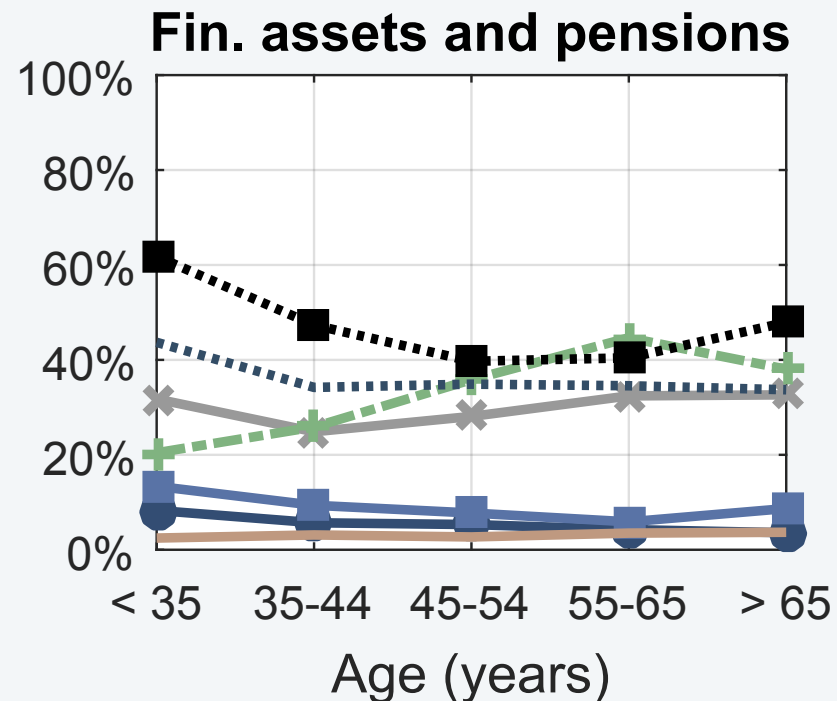


- ▶ Mortgages are households' largest liability in China, the US, the UK, and Australia, but account for a small part of total liabilities (23%) of Indian households. Most debt is unsecured (55%).



# Allocation over the life-cycle

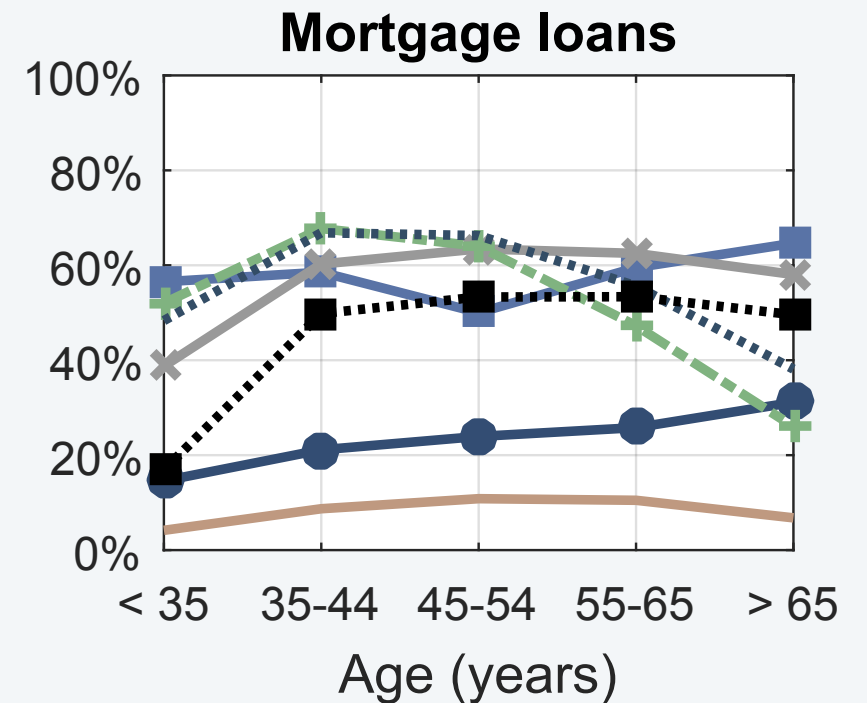
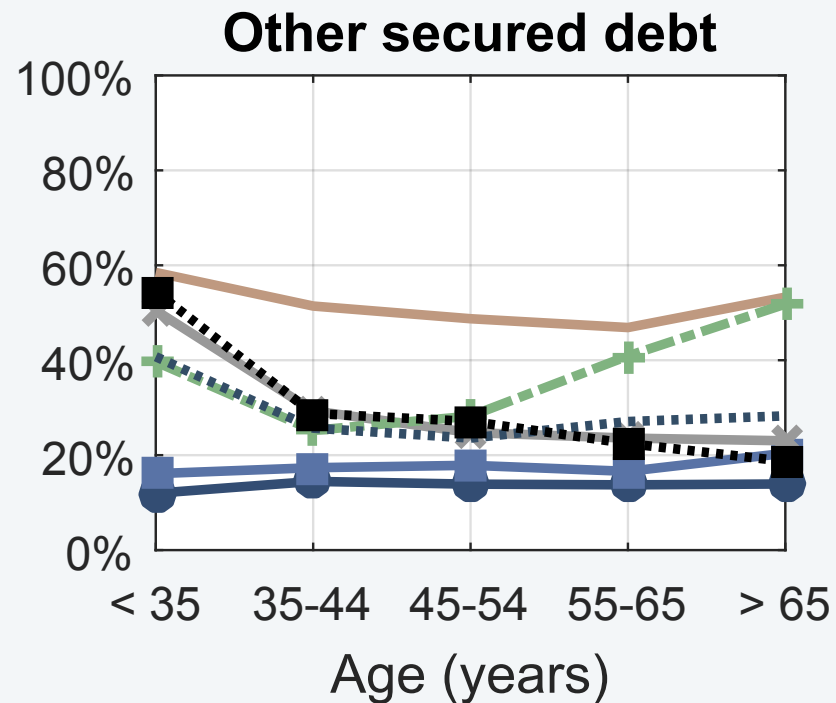
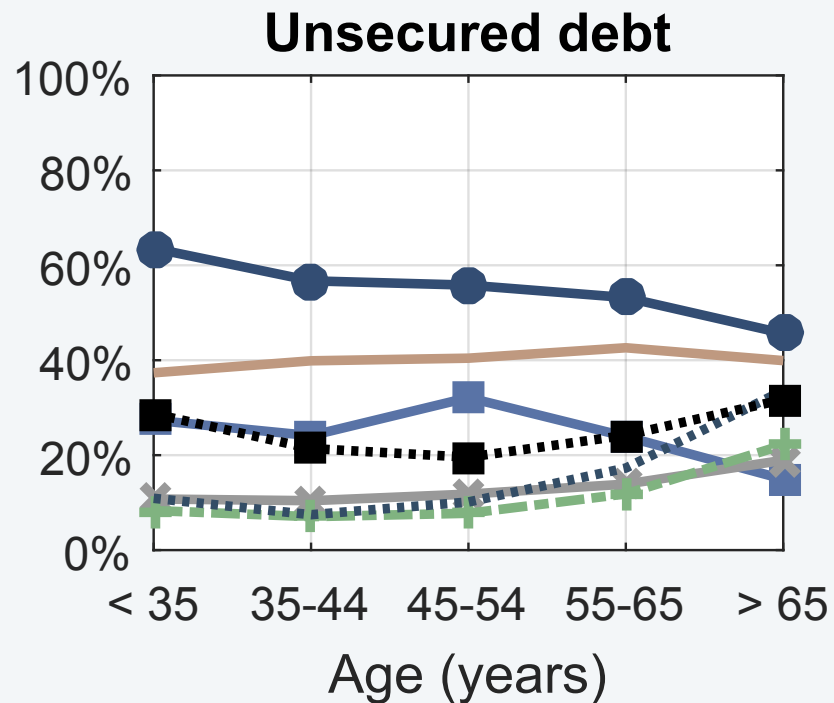
## Asset side of the household balance sheet



- ▶ Over-exposure to non-financial assets, and pensions are a negligible fraction of assets.
- ▶ Calibrated life cycle model: Only way to rationalize life-cycle allocation is to assume very efficiently functioning secured debt markets.

# Allocation over the life-cycle

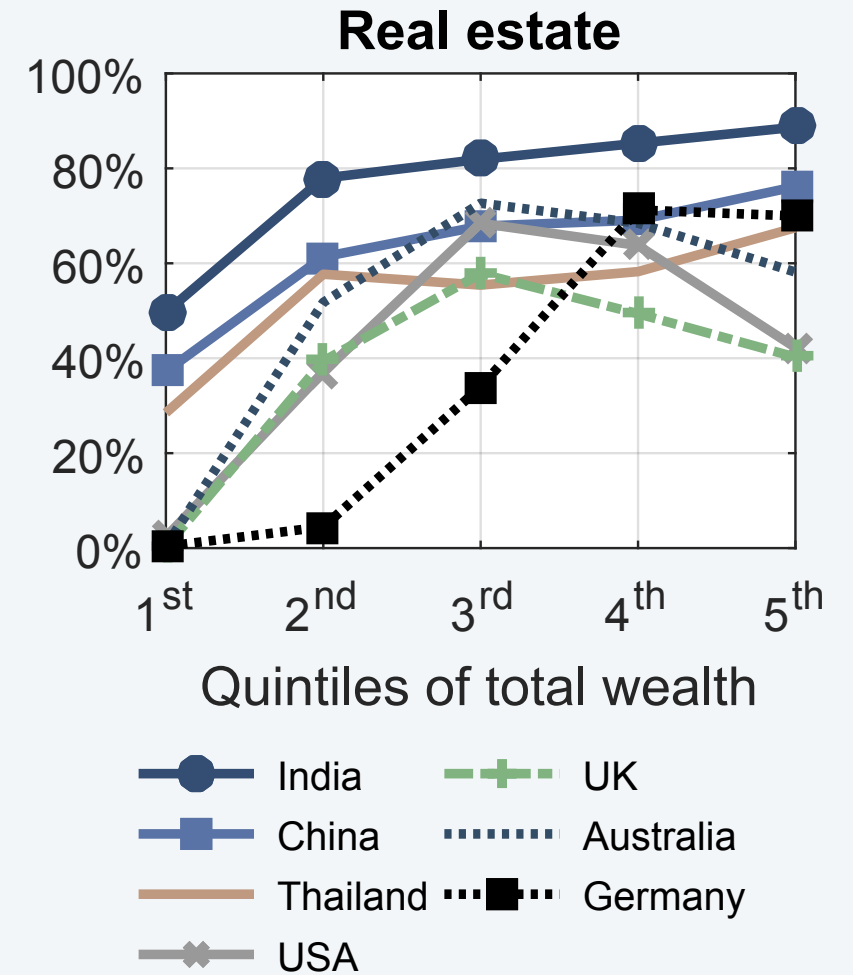
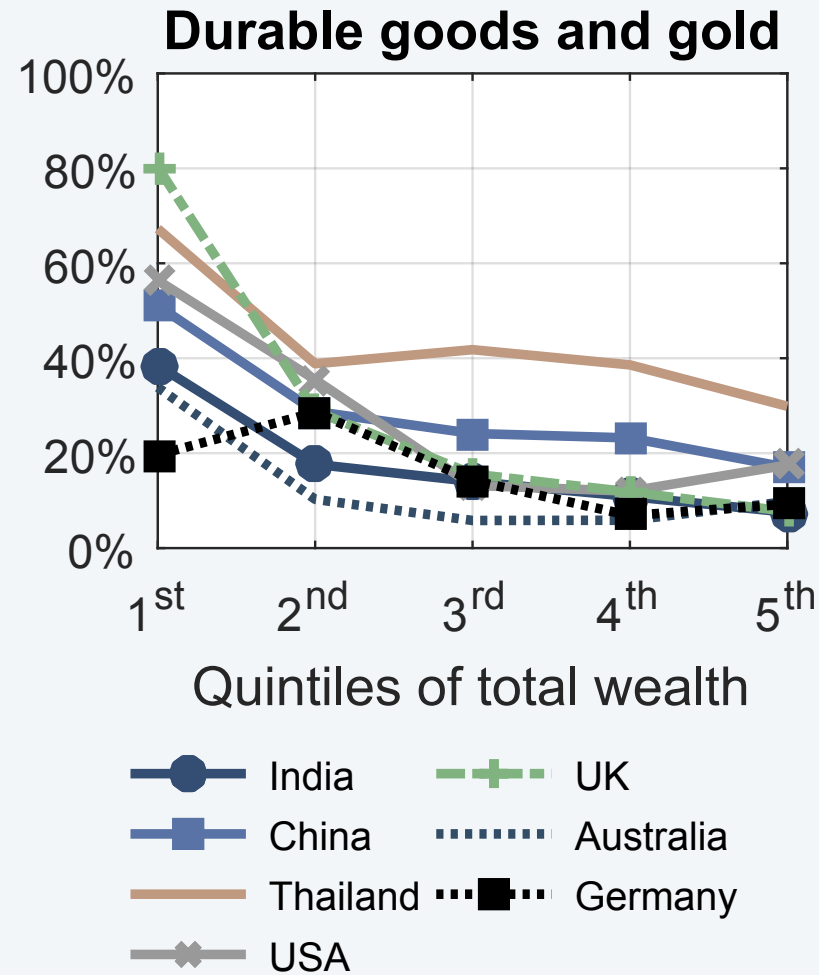
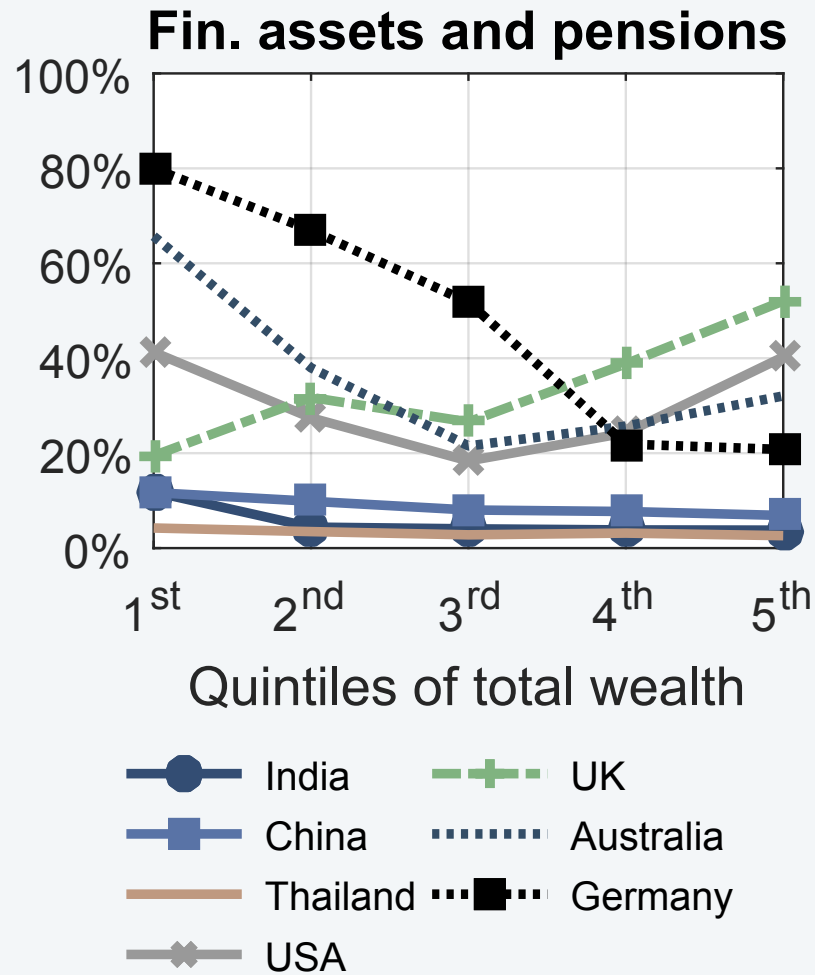
## Liabilities side of the household balance sheet



- ▶ Intense reliance on unsecured debt, especially at young ages.
- ▶ In both India and China, life-cycle profiles are inconsistent with advanced economies, especially for mortgages.

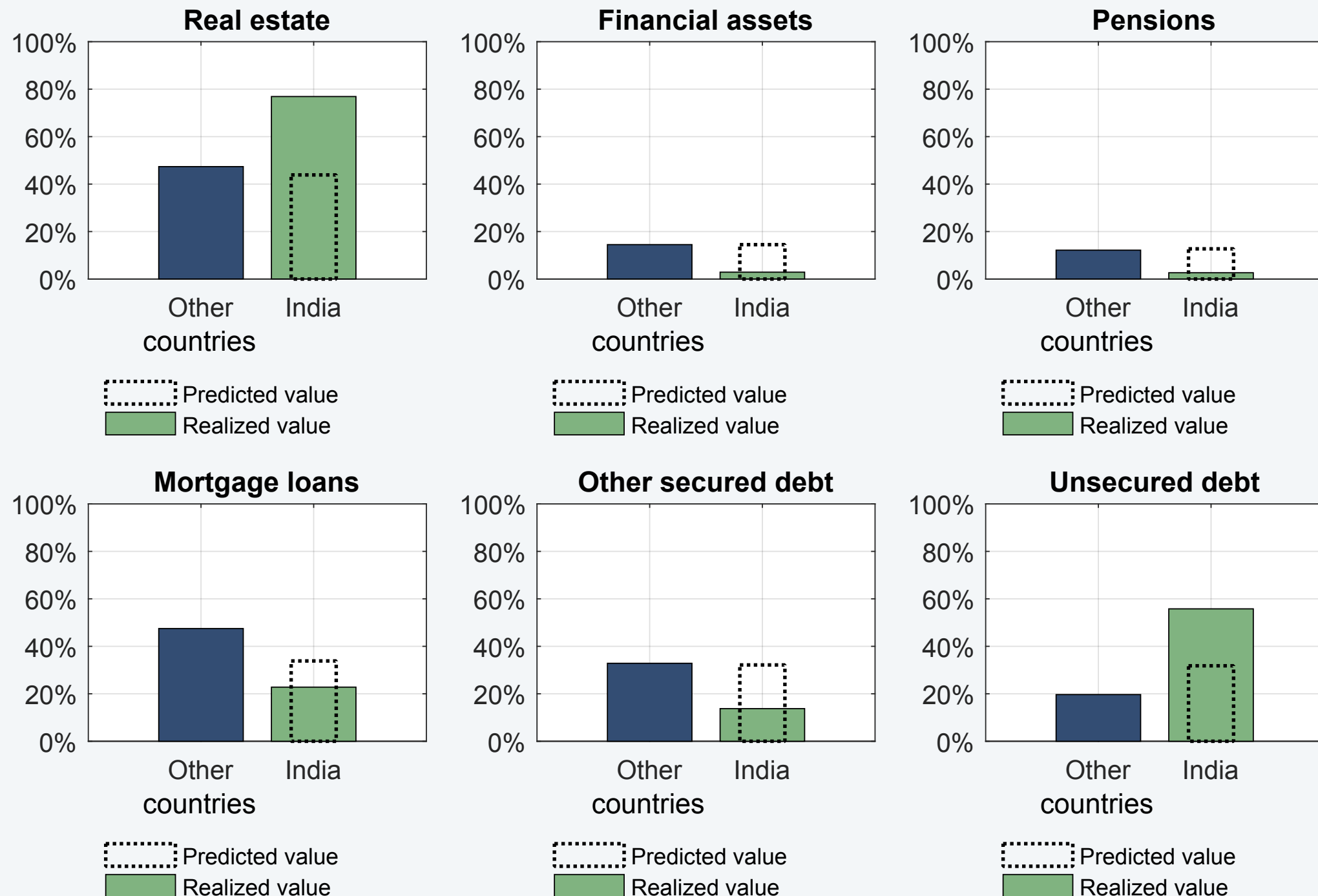
# Allocation across the wealth distribution

## Asset side of the household balance sheet



- Differences in exposure to real estate are driven by households at the **bottom** of the wealth distribution.

# Cross-country comparison: Blinder-Oaxaca Decomposition



- Cross-country differences aren't well-explained by differences in household demographic characteristics.

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Understanding international differences

Indian household financial decisions

Geographic heterogeneity

Household behaviour

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Enabling improved household finance outcomes

Explaining household behaviour

Recommendations

Appendix

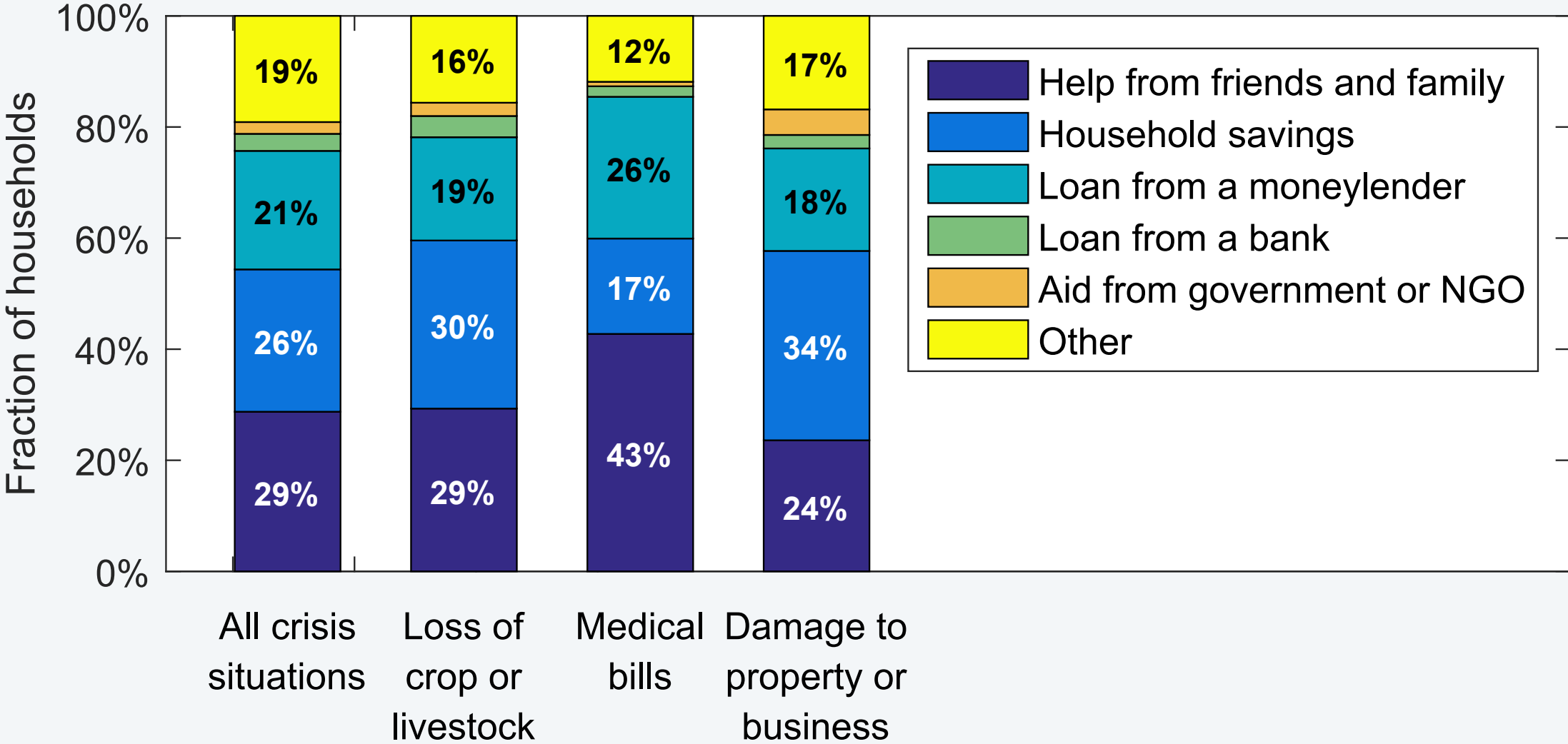
# Asset and Debt variation across states

- ▶ The allocations of assets and liabilities are very different across Indian states.
- ▶ Distinguishing between access and use of bank accounts:
  - ▶ Highest access regions: Himachal Pradesh, Tamil Nadu, and Goa.
  - ▶ Poorest access regions: Jharkhand, Chattisgarh, and Gujarat.
  - ▶ Although 58% in Chattisgarh have bank accounts, only 18.30% use them.
- ▶ Life insurance products:
  - ▶ Chattisgarh has the lowest rates of penetration (2.15%).
  - ▶ Karnataka and Tamilnadu have the highest penetration rates of 22.51% and 17.10%.
  - ▶ US: 59% (Prudential).
- ▶ In states such as Tamil Nadu, households store a high fraction of their wealth in gold, and also have more than 40% of their total debt in the form of gold loans.

# Household behaviour: Coping with emergencies

Source: Financial Inclusion Insights Survey.

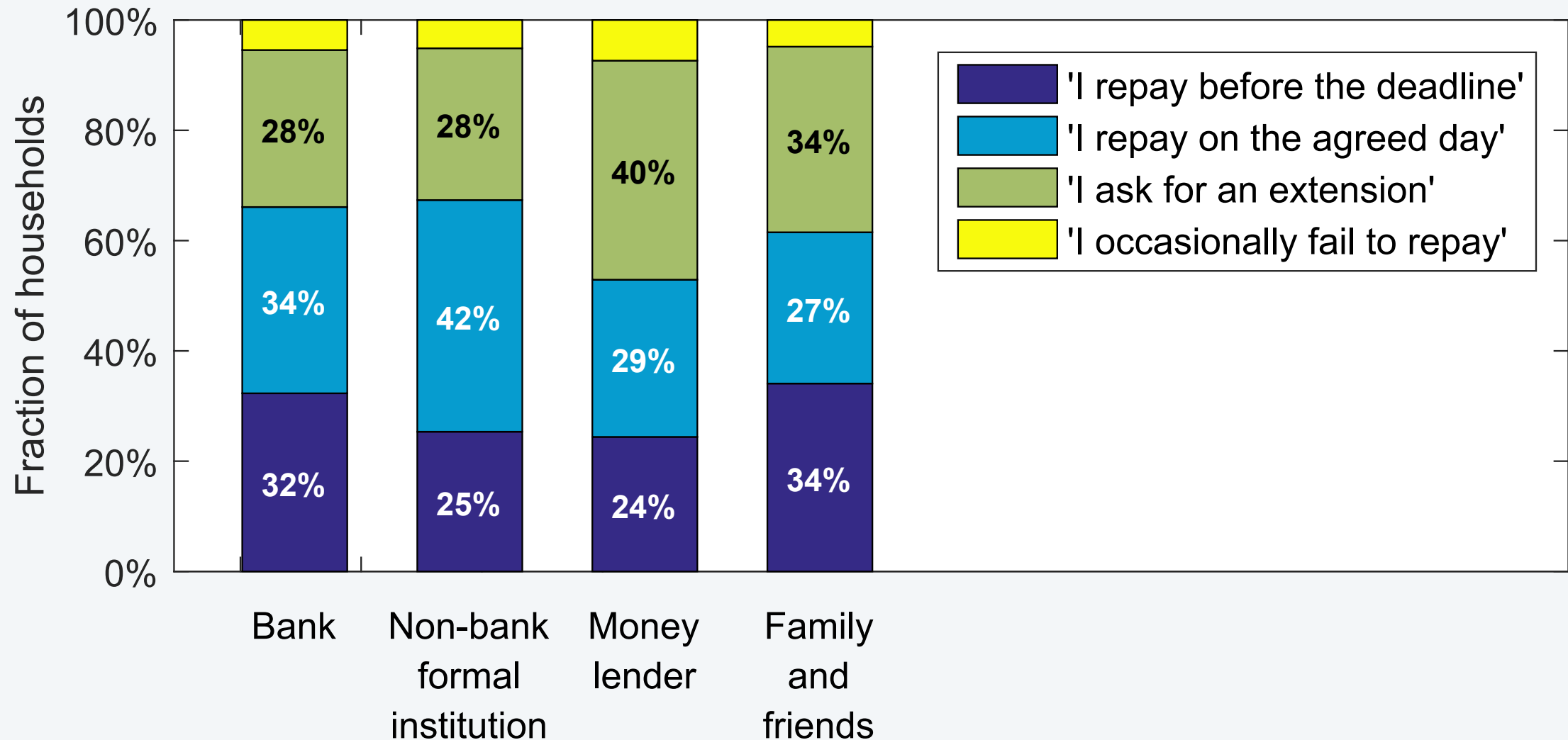
## Sources of emergency funds



# Household behaviour: Financial decisions

Source: Financial Inclusion Insights Survey.

## Loan repayment behaviour



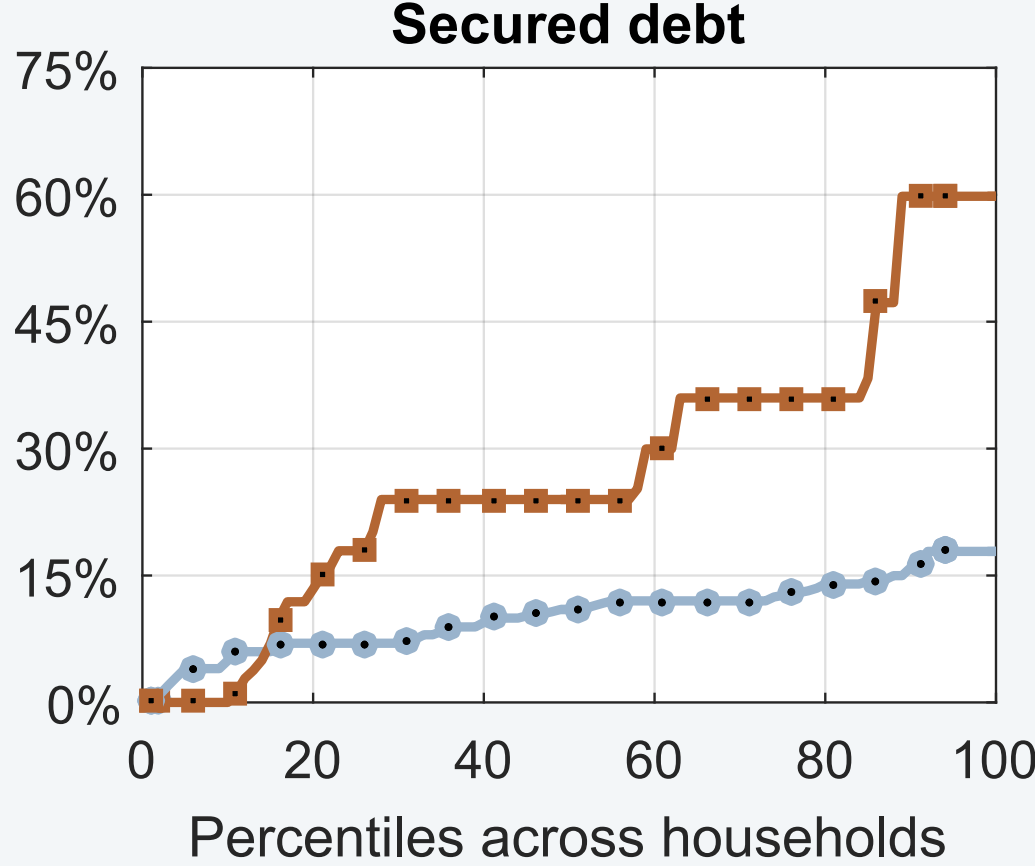
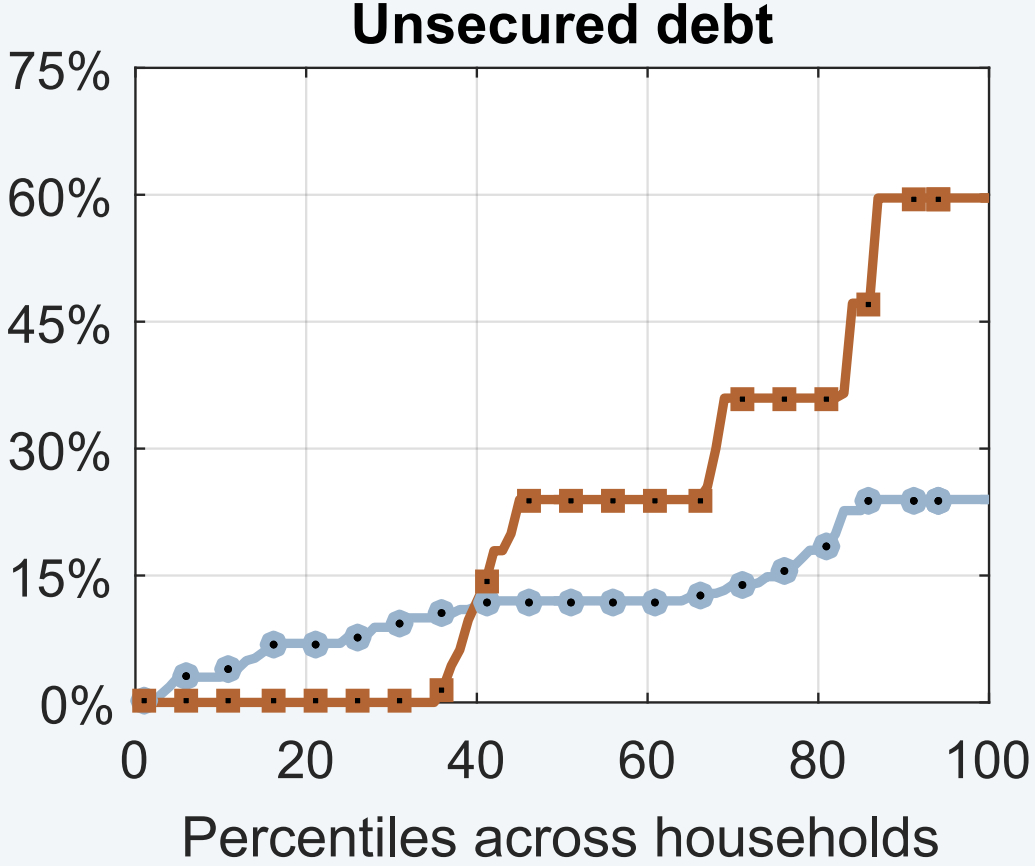
Substitution between non-institutional loans, and insurance



# Household behaviour: Financial decisions

Source: All-India Debt and Investment Survey.

## Loan interest rates (per year)



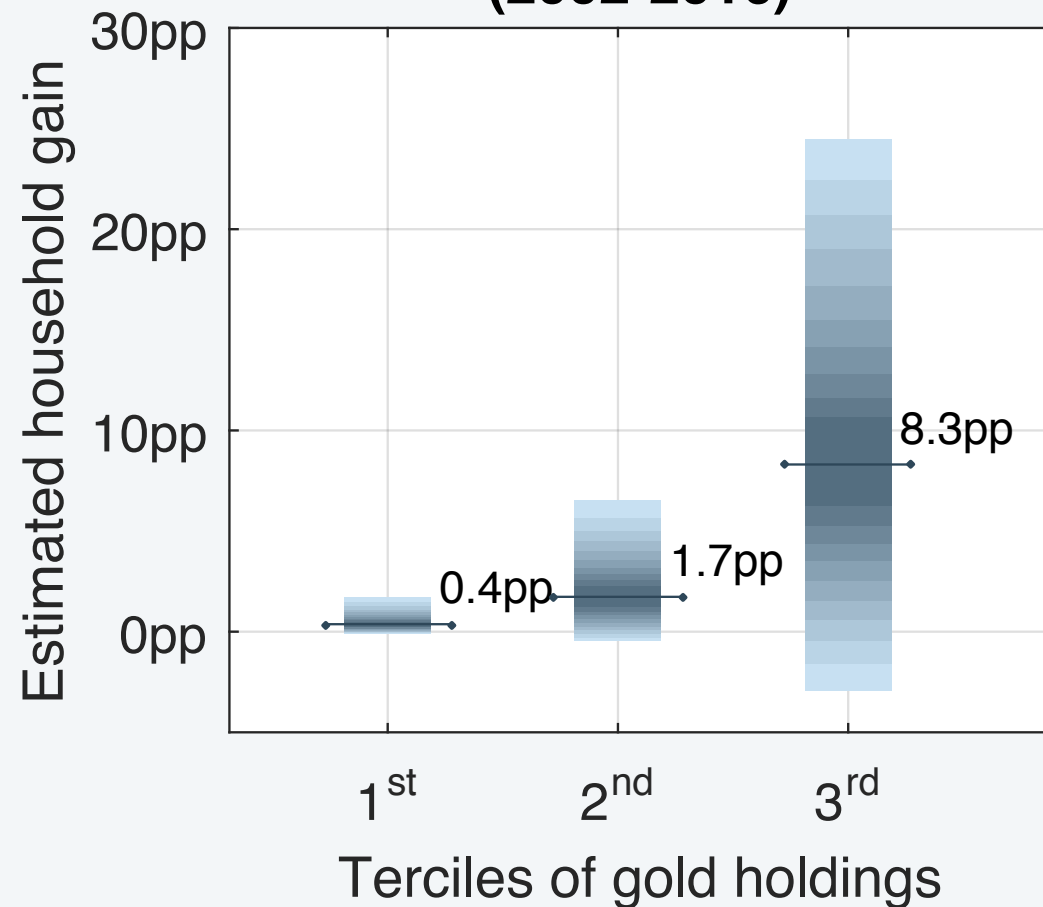
—●— Institutional sources —■— Non-institutional sources

# Gains from re-allocation of household wealth I

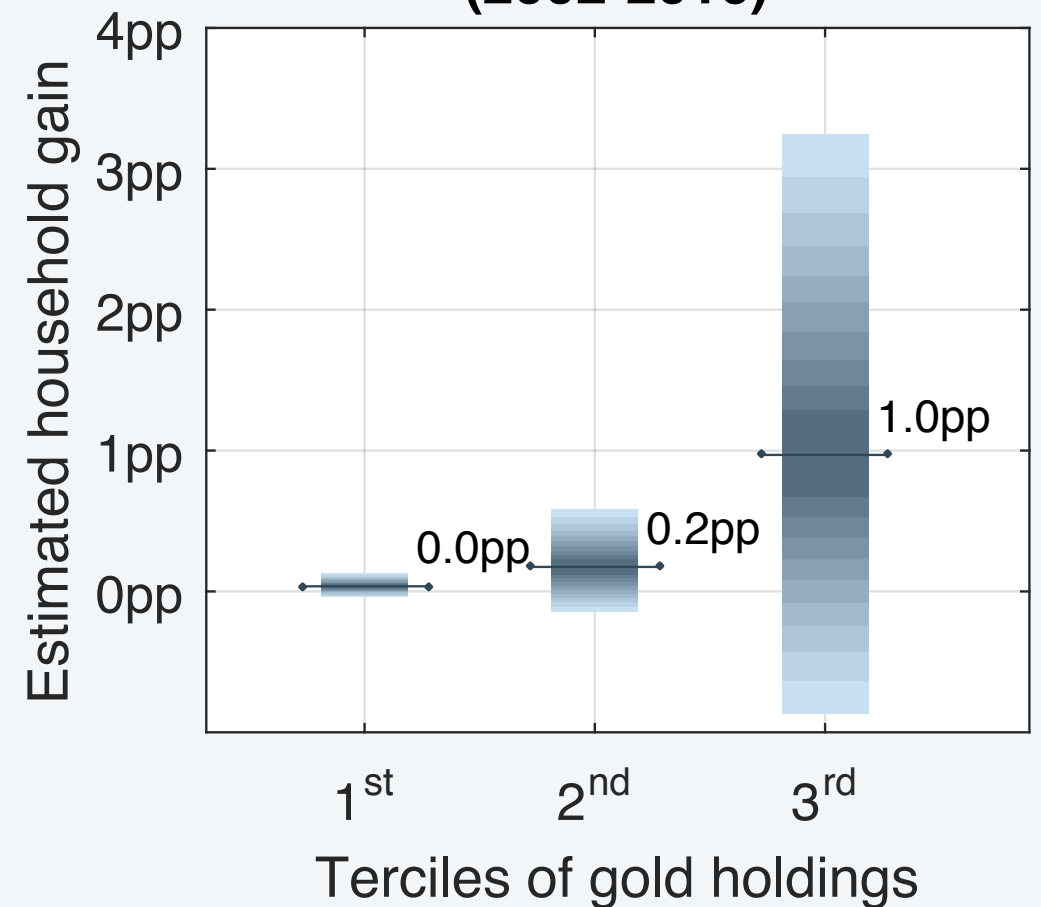
Percentage point movement along the wealth distribution

## Gold holdings

**India return profile  
(2002-2016)**



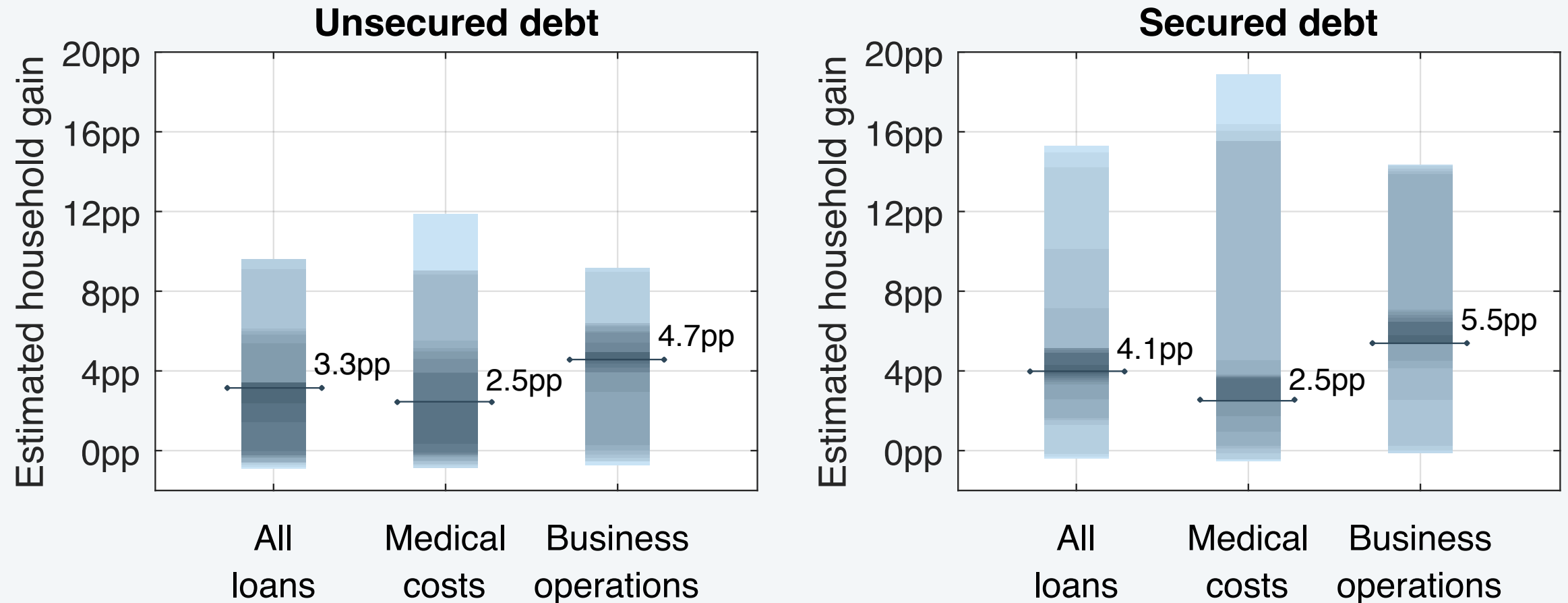
**United States return profile  
(2002-2016)**



# Gains from re-allocation of household wealth II

Percentage point movement along the wealth distribution

## Non-institutional debt

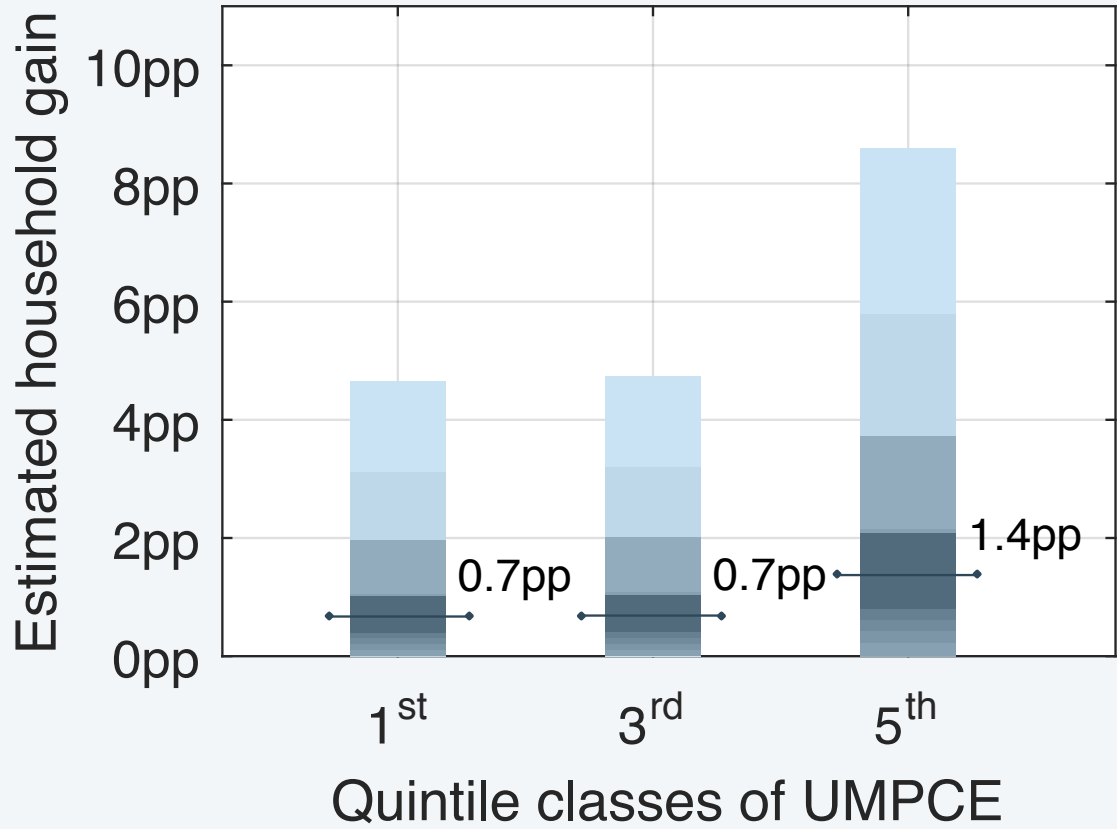


# Gains from re-allocation of household wealth III

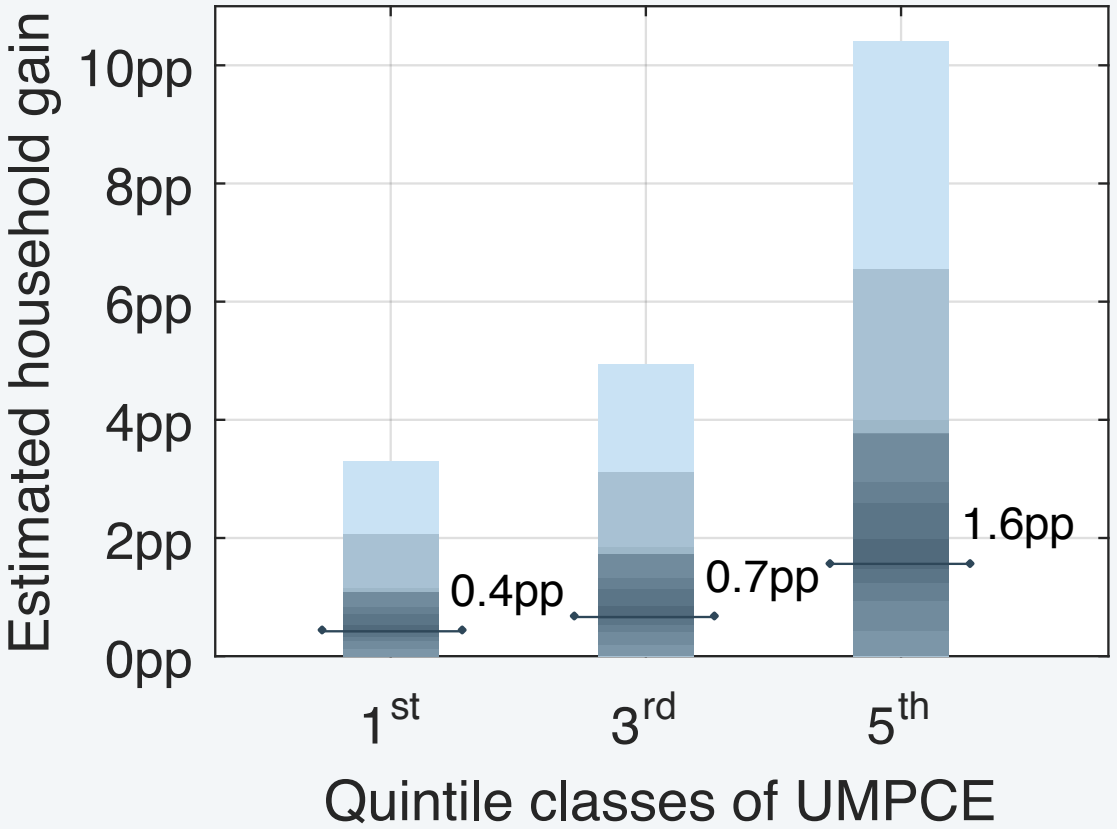
Percentage point movement along the wealth distribution

## Health insurance

### Rural households



### Urban households



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# Explaining household behaviour

- ▶ The lack of **trust** in financial institutions partly explains the tendency of households to avoid financial products and invest in physical assets such as gold instead.
- ▶ The role of non-institutional debt appears to be related to the **urgency** of the financial need.
- ▶ Households associate formal banking institutions with large administrative burdens, complicated paperwork, and confusing **terms and conditions**.
- ▶ Lack of participation in the market for life insurance products is related to the self-perceived financial management **skills** of the household head.
- ▶ **Financial goals** are often driven by "**life-events**" such as marriage.
- ▶ Poor access to credit markets for micro-enterprise cause household financial goals to also reflect small business goals.

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# Mortgages I

- ▶ Real-time reset of floating interest rates, common quotation conventions.
- ▶ Quoting loans to customers in the form of a market-wide standardised rate + spread as opposed to MCLR + spread, to facilitate cross-product comparison.
- ▶ Standardising the reset period across banks, to be immediate.
- ▶ Banks should quote the rate for every fixed rate product relative to the repo rate, or other benchmark rate.
- ▶ Remove the tax exemption for income from house property to discourage real estate as an investment.



# Mortgages II

- ▶ Do not specifically tie tax exemption on sale of residential property to re-investment in the property sector.
- ▶ Increase incentives for first-time home buyers with a mortgage interest tax deduction.
- ▶ PSL-confirming home loan limit to be indexed to level of house prices.
- ▶ Granular loan-level data to be provided by banks and NBFCs to RBI to facilitate research.

# CERSAI and SARFAESI

- ▶ Digital interface of CERSAI should be recalibrated to minimise time and cost of regulatory compliance.
- ▶ Make SARFAESI applicable to small as well as large loan sizes.
- ▶ Allow digital transfer of titles for collateral, digitize physical NACH form for enabling repayment.

# Gold

- ▶ Propose variant of gold bonds introduced with default matrilineal inheritance.
- ▶ Propose variant of gold bonds that can be physically redeemed at choice of household.
- ▶ Improve state and municipal bond market, and wider publication of local inflation indexes to facilitate exchange-traded products against these indices.
- ▶ Offer tax incentives to investors in inflation-indexed bonds.
- ▶ Support creation of a spot gold exchange.
- ▶ Propose PAN card requirement for gold transactions from jewellers be extended to all transactions regardless of size.
- ▶ Make unsecured credit widely available to households at favourable rates in the event of emergencies.
- ▶ All gold transactions to be registered electronically.

# Financial technology I

- ▶ Robo-advice encouraged subject to checks and balances including granular data on ultimate financial advisor providing advice.
- ▶ RBI's account aggregator rules amended so that it is mandatory for financial institutions to share information on authorization from the customer.
- ▶ Support e-KYC, and elimination of all paper processes or wet signatures.
- ▶ Propose DigiLocker service be extended to brokers, insurance companies, and nationalised banks, and link CERSAI to DigiLocker.

# Financial technology II

- ▶ Seamless switching across financial products at the request of the consumer at low cost, portability of e-KYC across products.
- ▶ Further simple financial products to be seeded using PMJDY as a platform.
- ▶ More complicated financial products to require explicit “opt-in” by consumers.
- ▶ Support new data privacy framework to protect household data, using a rights-based approach.

# Regulatory Sandbox

- ▶ Propose establishment of a cross-regulator “Regulatory Sandbox”, a safe space in which the regulator can facilitate small-scale tests by temporarily relaxing certain regulations to collect empirical evidence whilst containing risks.
- ▶ Report provides a detailed blueprint for the Sandbox.

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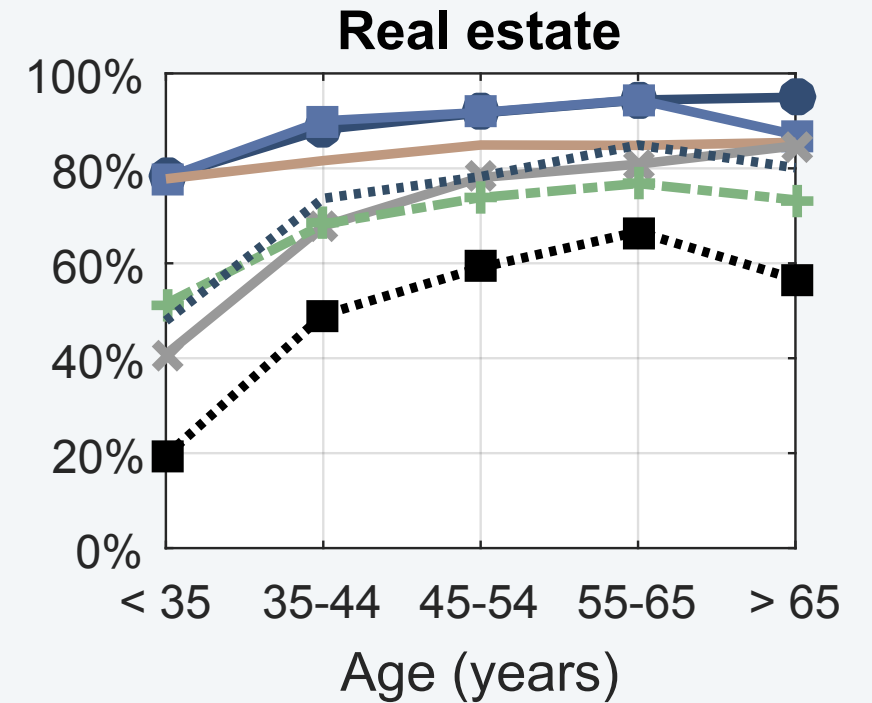
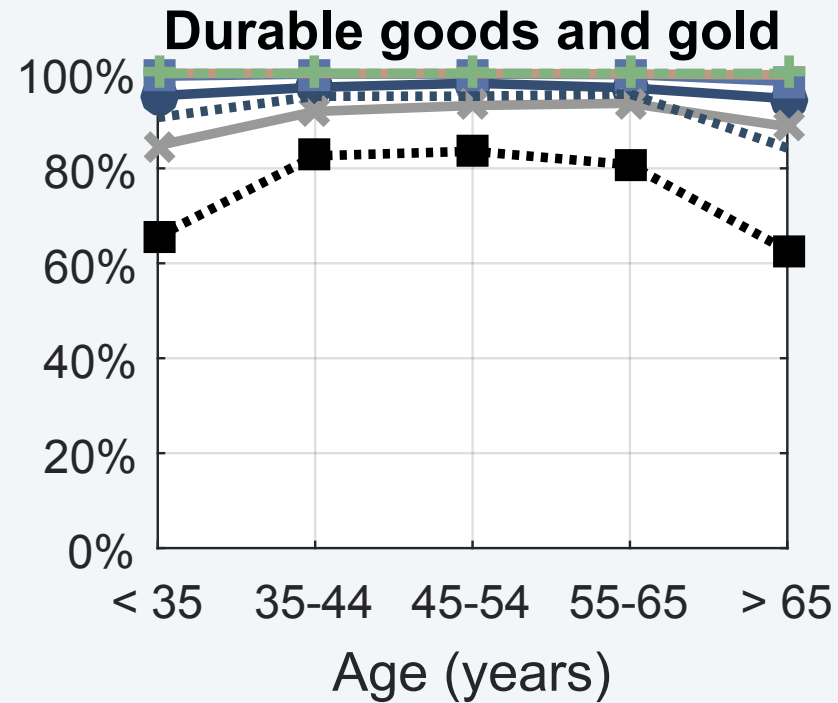
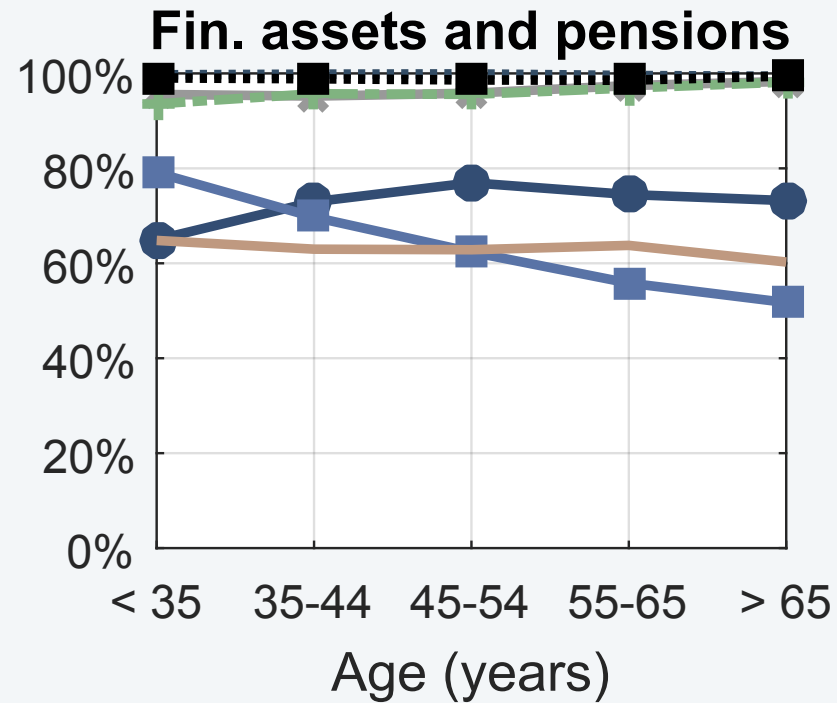
- Explaining household behaviour

## Recommendations

# Appendix

# Participation over the life-cycle

## Asset side of the household balance sheet

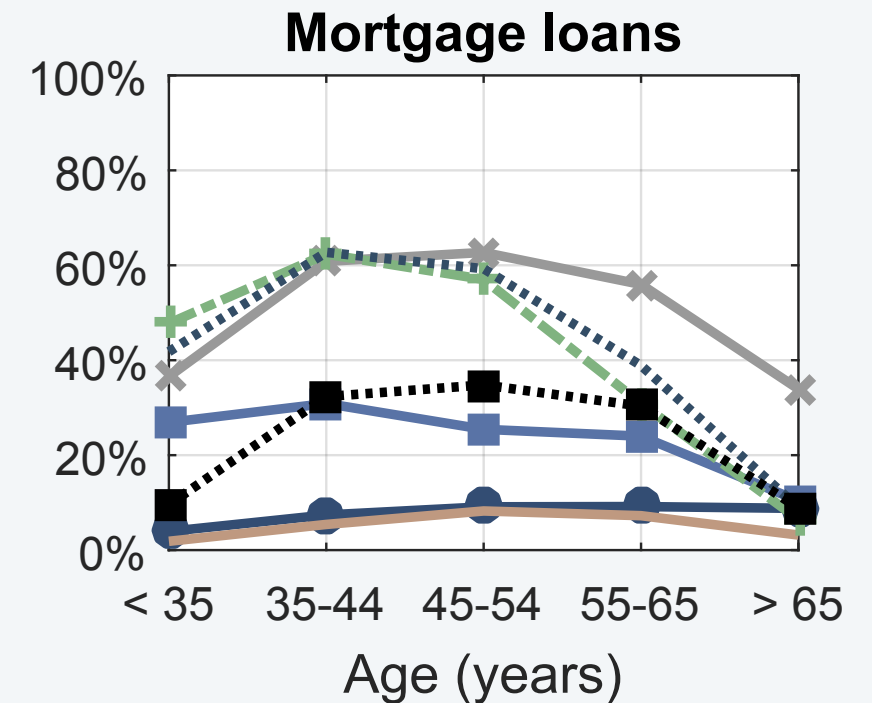
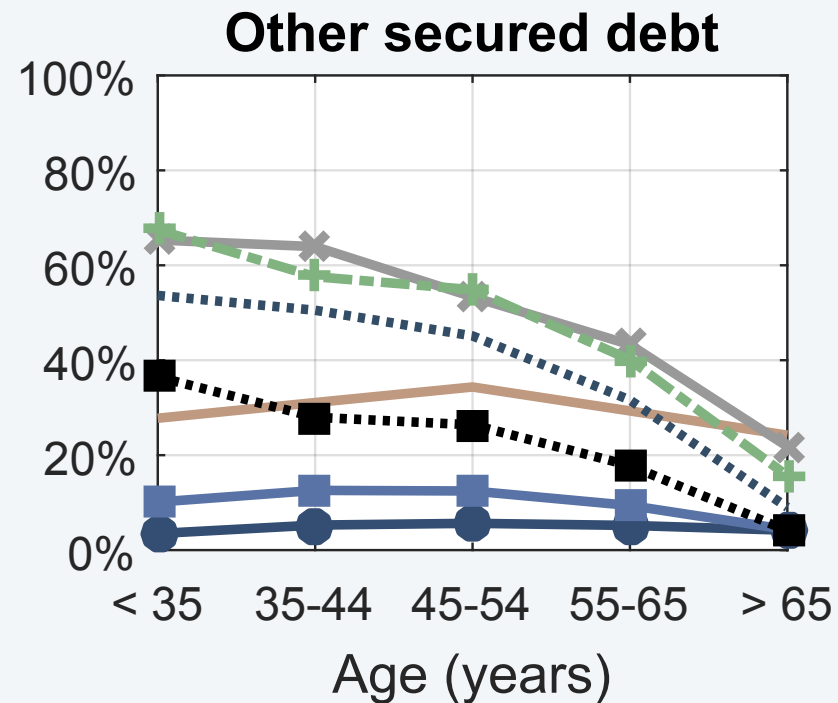
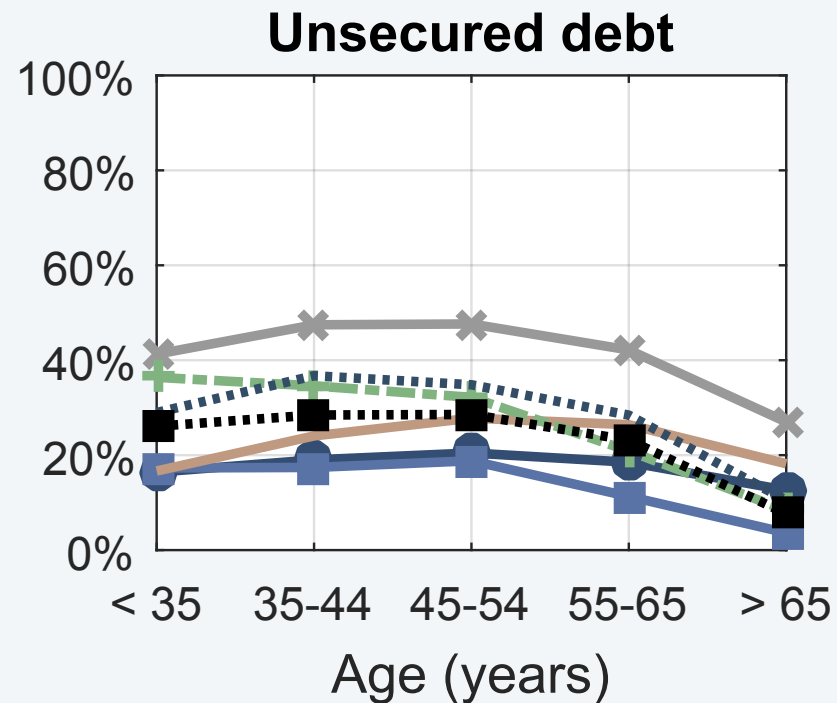


- ▶ India and China: high rate of home-ownership and low participation rates in financial assets and pension accounts.



# Participation over the life-cycle

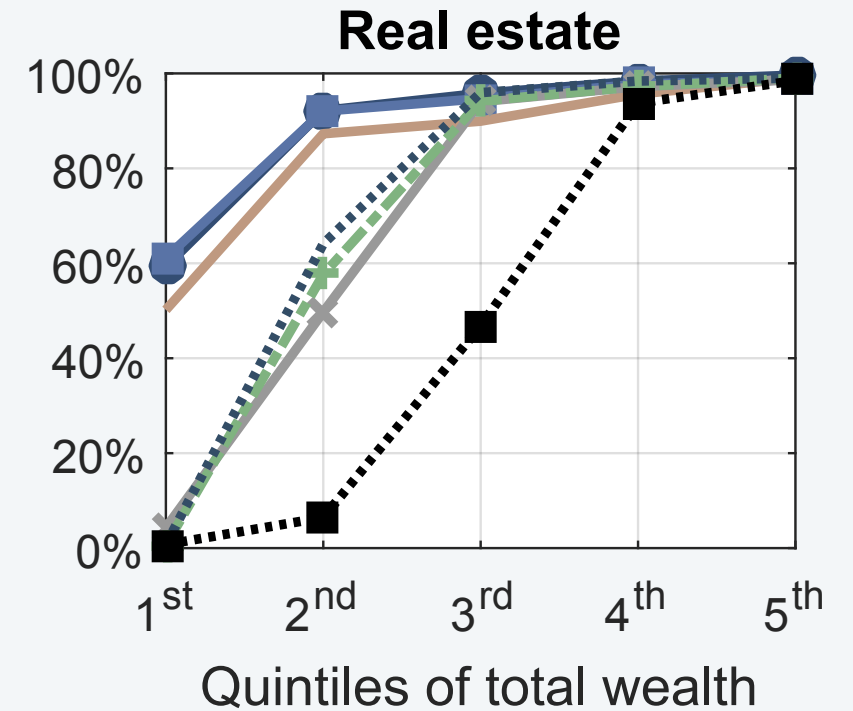
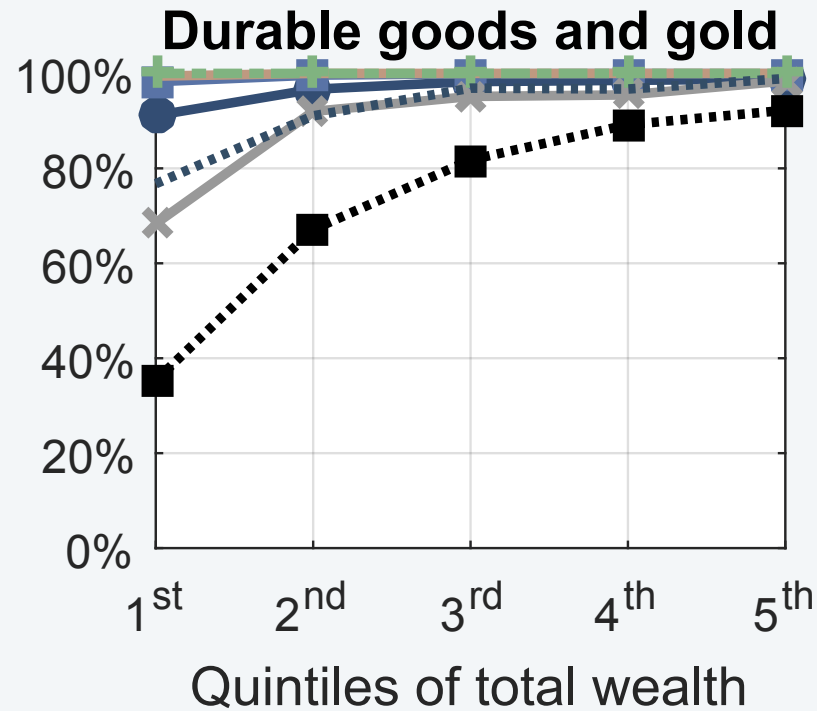
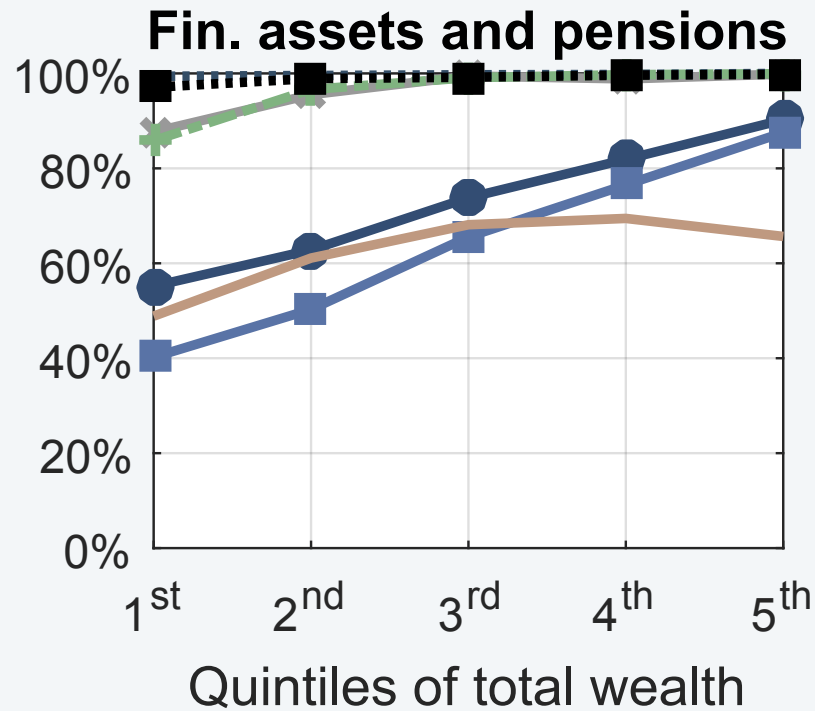
## Liabilities side of the household balance sheet



- ▶ Significantly lower participation of households in all debt markets in both India and China.
- ▶ Reduction of debt as people approach retirement age less evident, or even reversed.

# Participation across the wealth distribution

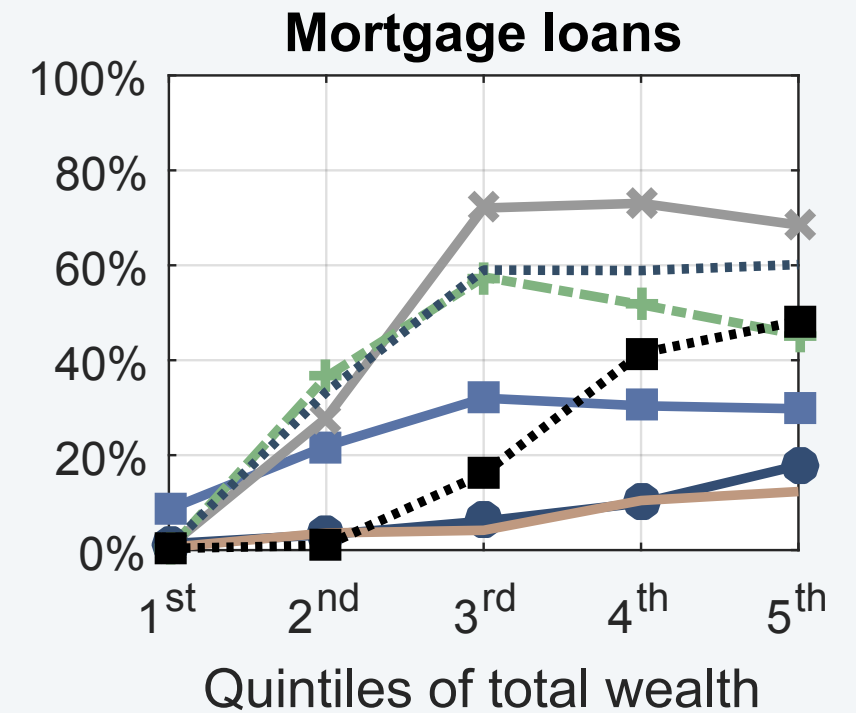
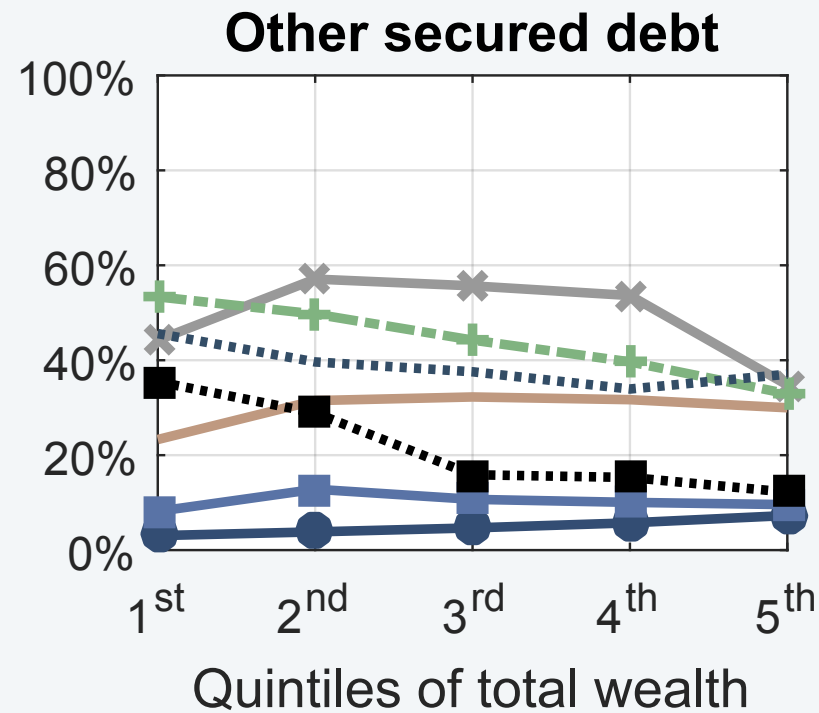
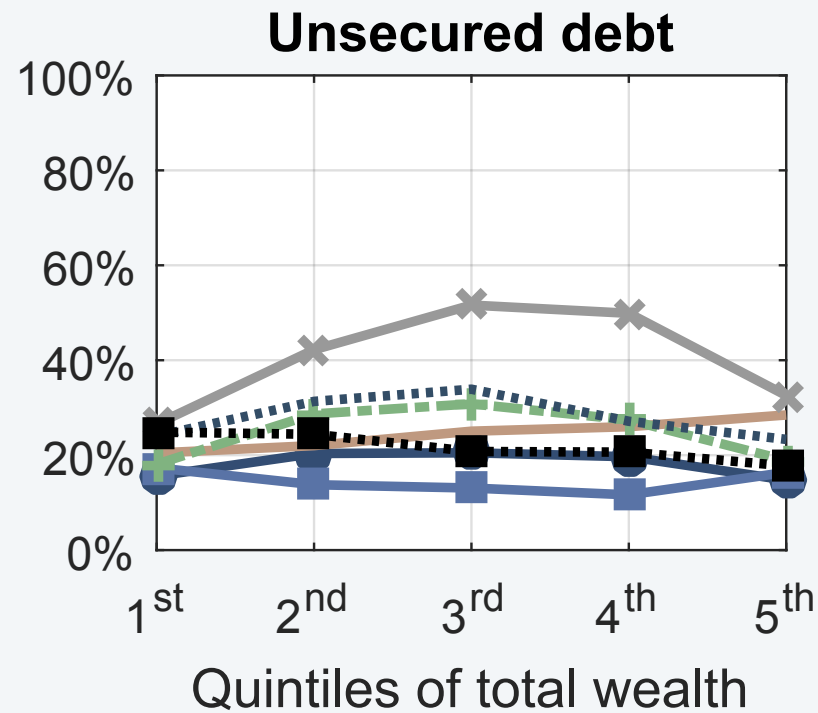
## Asset side of the household balance sheet



- ▶ Top quintile similar to advanced economies.
- ▶ High participation rate in durables, gold, and real estate even for households with low wealth.

# Participation along the wealth distribution

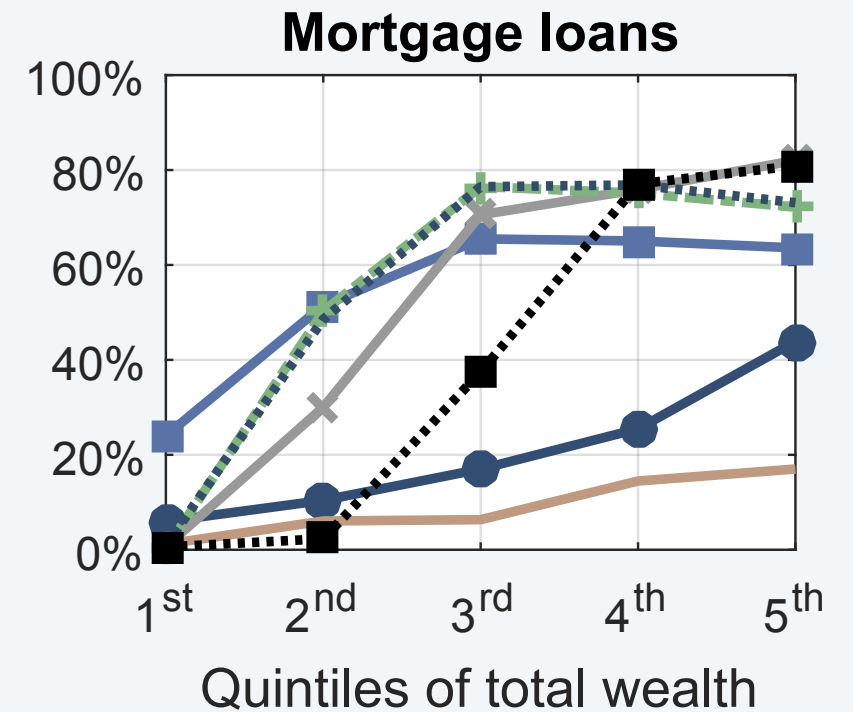
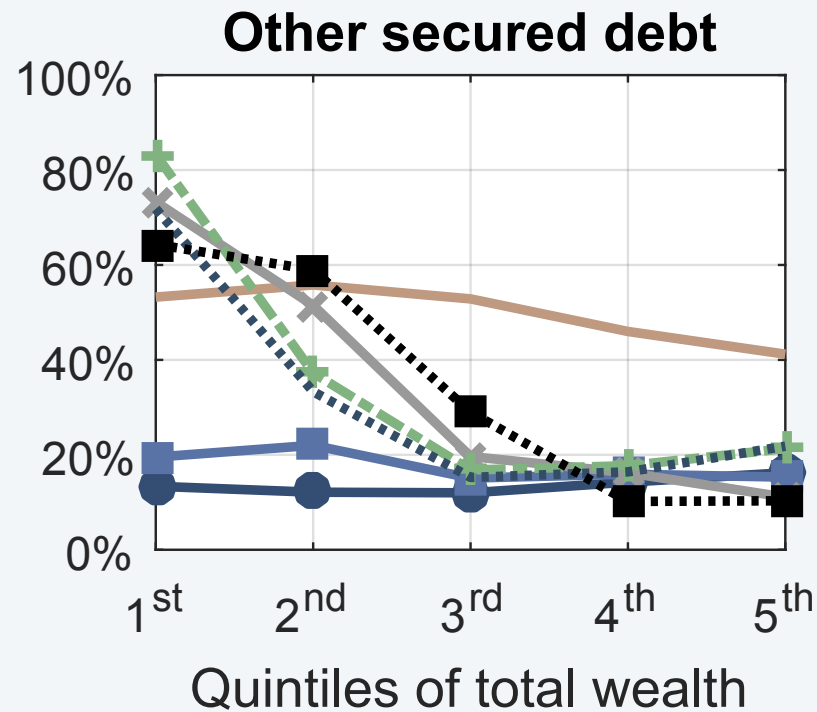
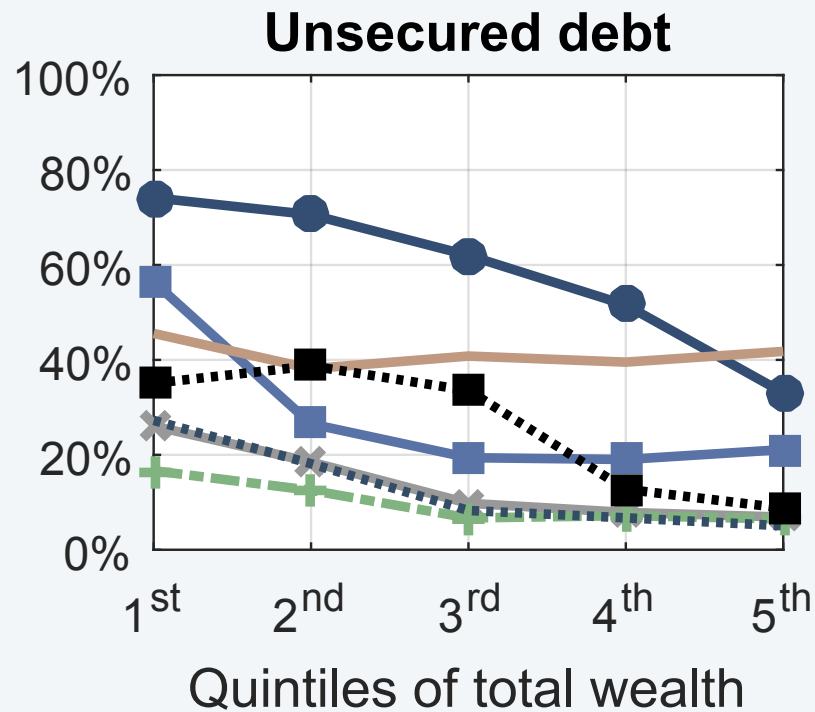
## Liabilities side of the household balance sheet



- ▶ Low participation in all secured debt markets, especially stark for mortgages since households end life with high home equity.

# Allocation along the wealth distribution

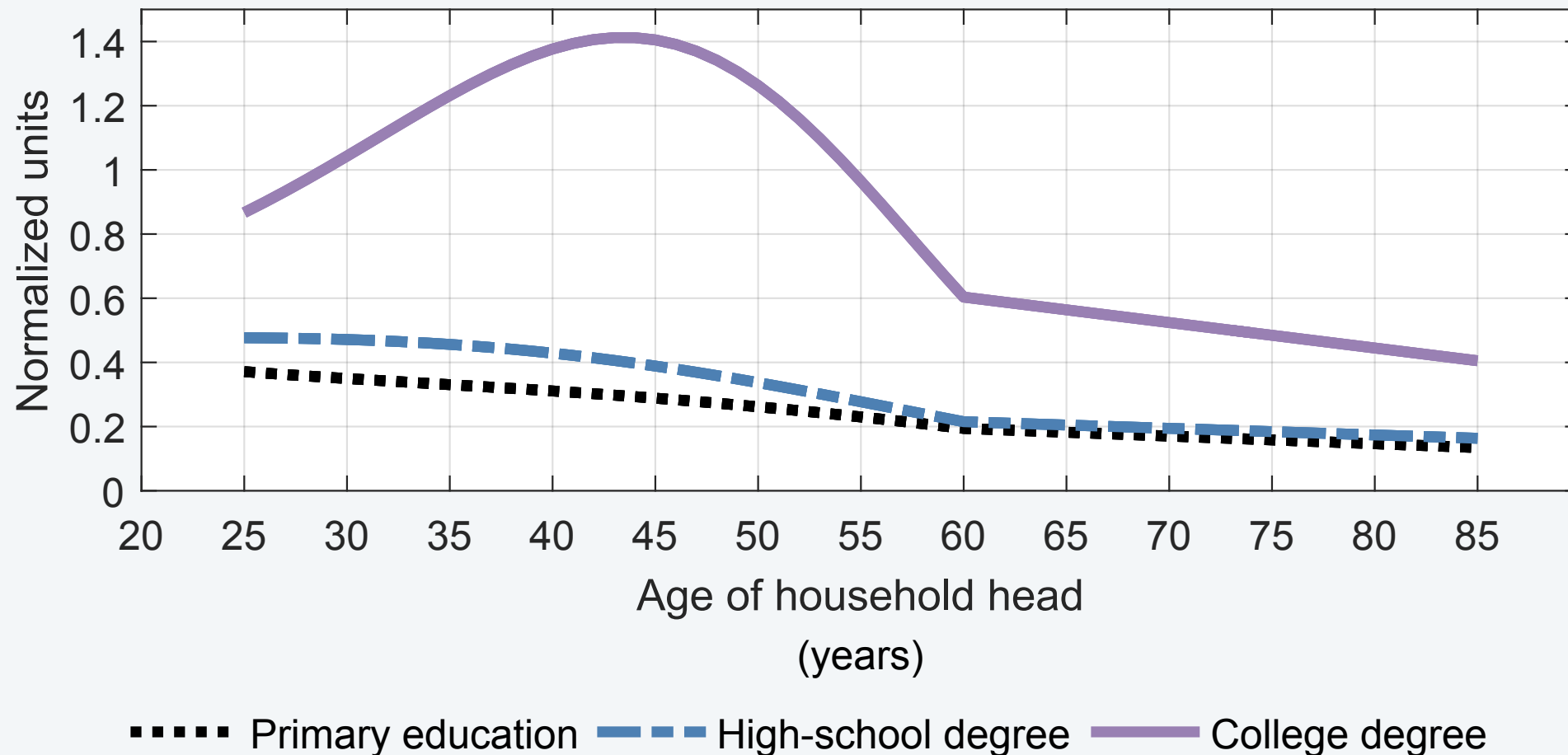
## Liabilities side of the household balance sheet



- ▶ Difference in mortgage indebtedness are driven by households at the **top** of the wealth distribution.
- ▶ Home equity accumulation evident from difference between real estate and mortgage allocation.

# Optimal allocations - Income profile

Units: Fraction of annual permanent income



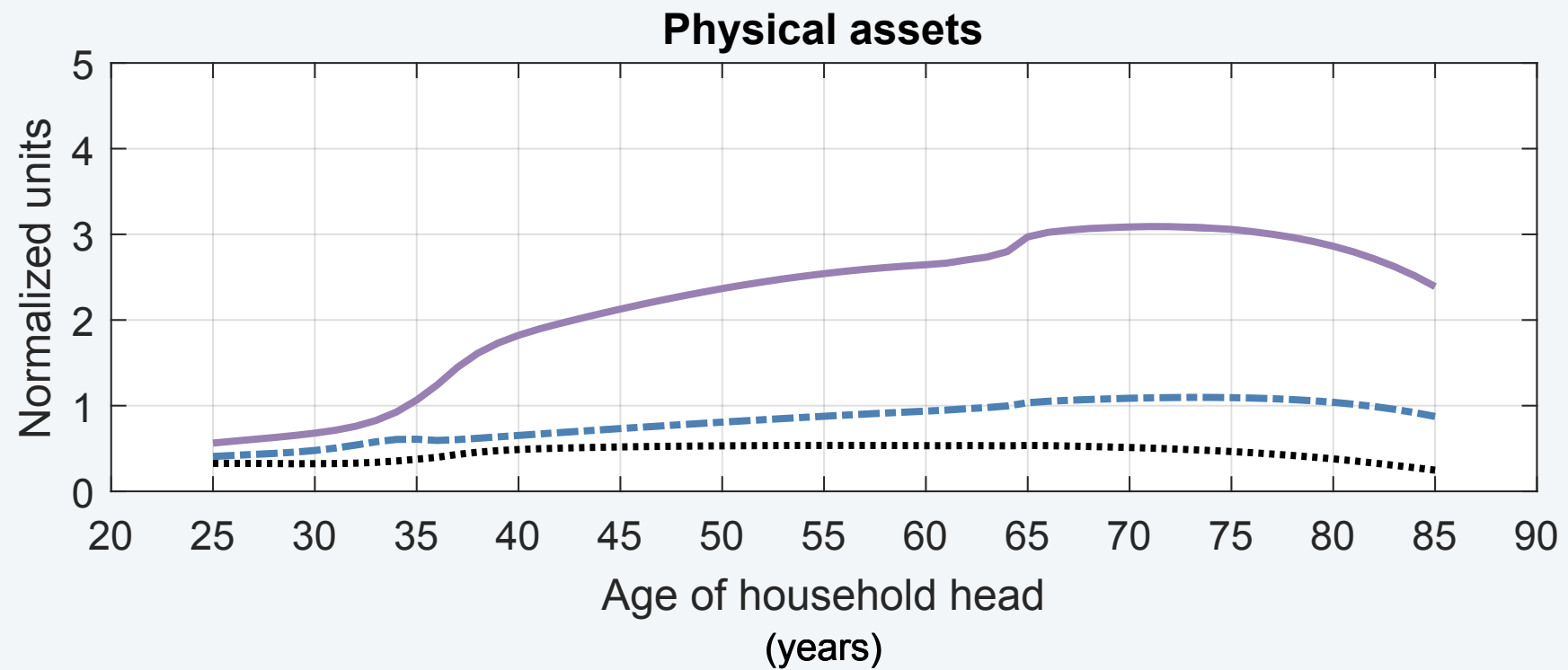
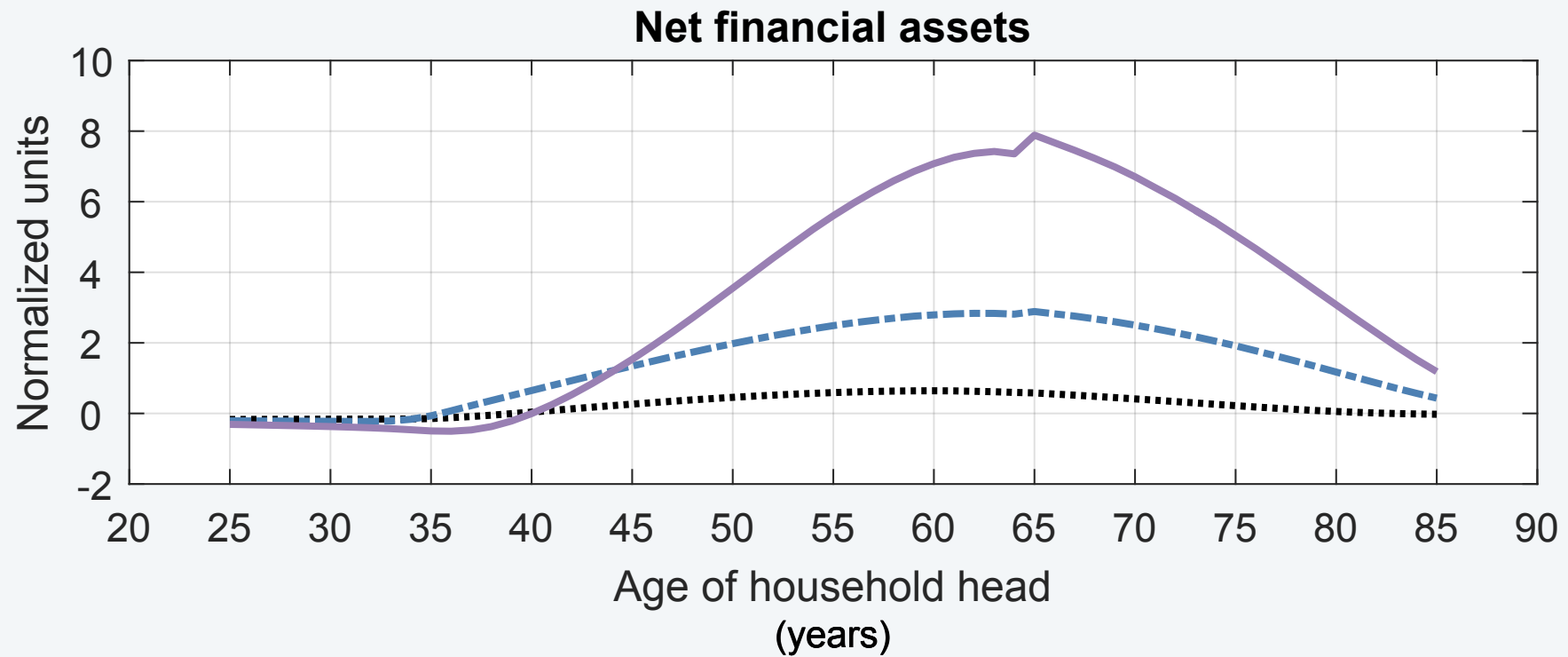
- ▶ Evolution of household income profiles (normalized by average income in the population).
- ▶ Fitted third-degree polynomial through coefficients on age dummies in a regression of family income on ages. Income after 70 is the median income of household whose heads are over 70 years of age.
- ▶ **Data Source:** India Human Development Survey, 2015

# Optimal allocations - Model

- ▶ Individuals derive consumption utility from durable goods and also use durable goods as collateral.
  - ▶ Durable good can be frictionlessly and smoothly collateralized against debt – "best possible case."
- ▶ Uncertain exogenous labour income, consumption-savings problem with choice of financial (risk-free) asset, and durable good.
  - ▶ Can vary rate of return on financial relative to durable, comparative statics.
  - ▶ Financial assets earn interest, durables depreciate, quadratic adjustment cost between the two, linear component of which is 3%.
  - ▶ Collateral constraint – 75% (as in LTV for mortgages in India).
- ▶ Trying to understand model predictions on *extensive* margin between non-financial (durable) and financial assets.

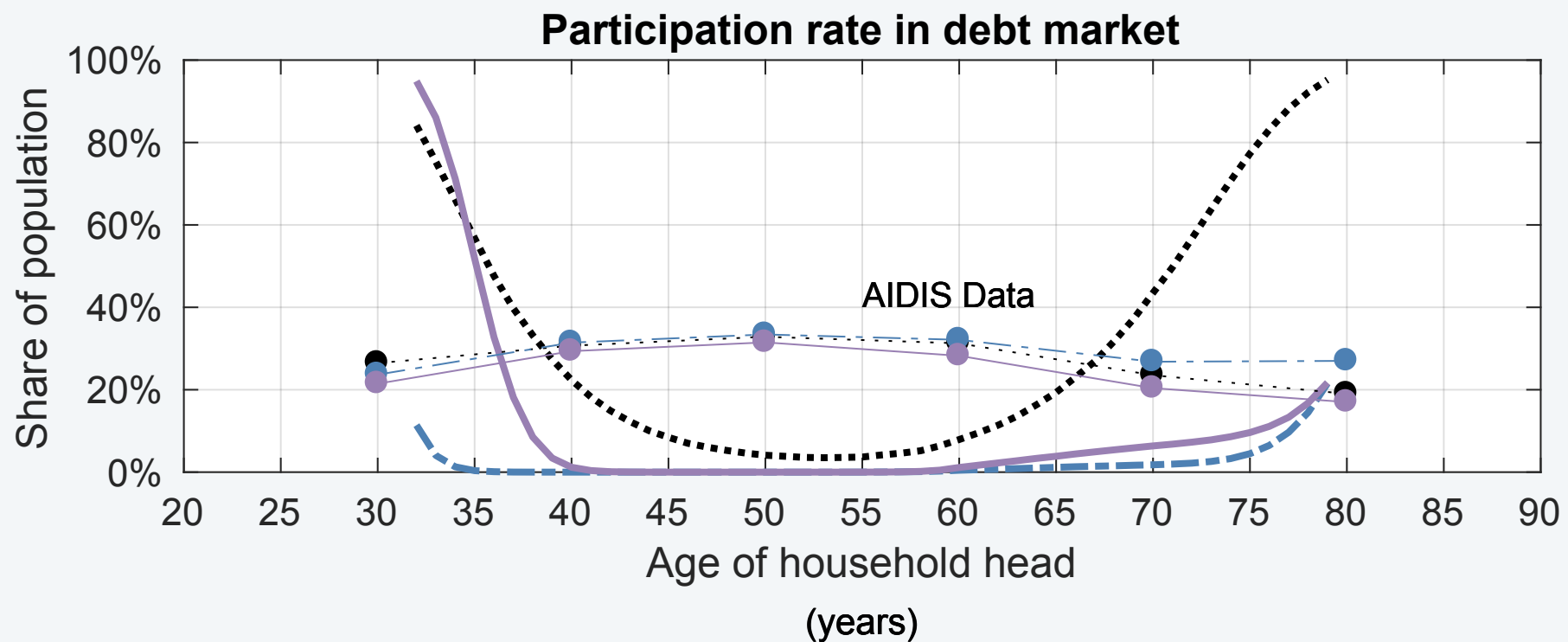
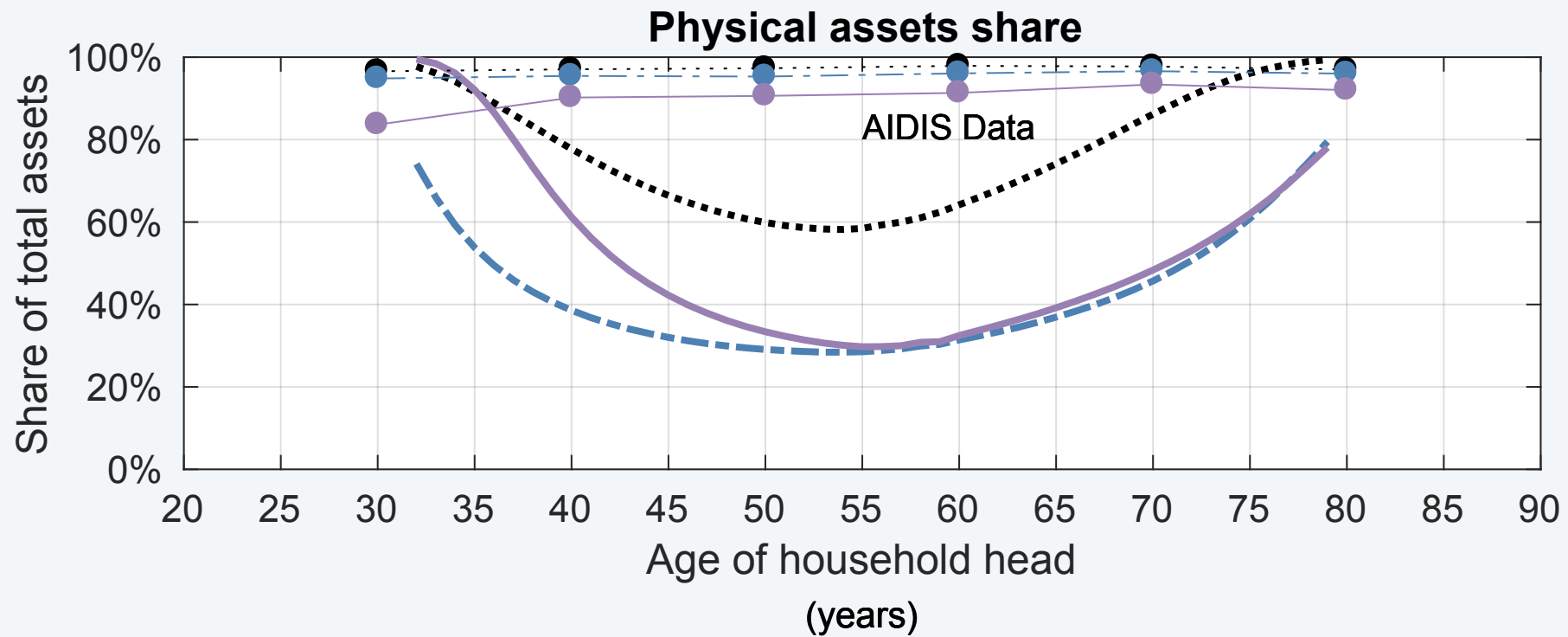
# Life-cycle profile

Units: Fraction of annual permanent income



# Optimal allocations

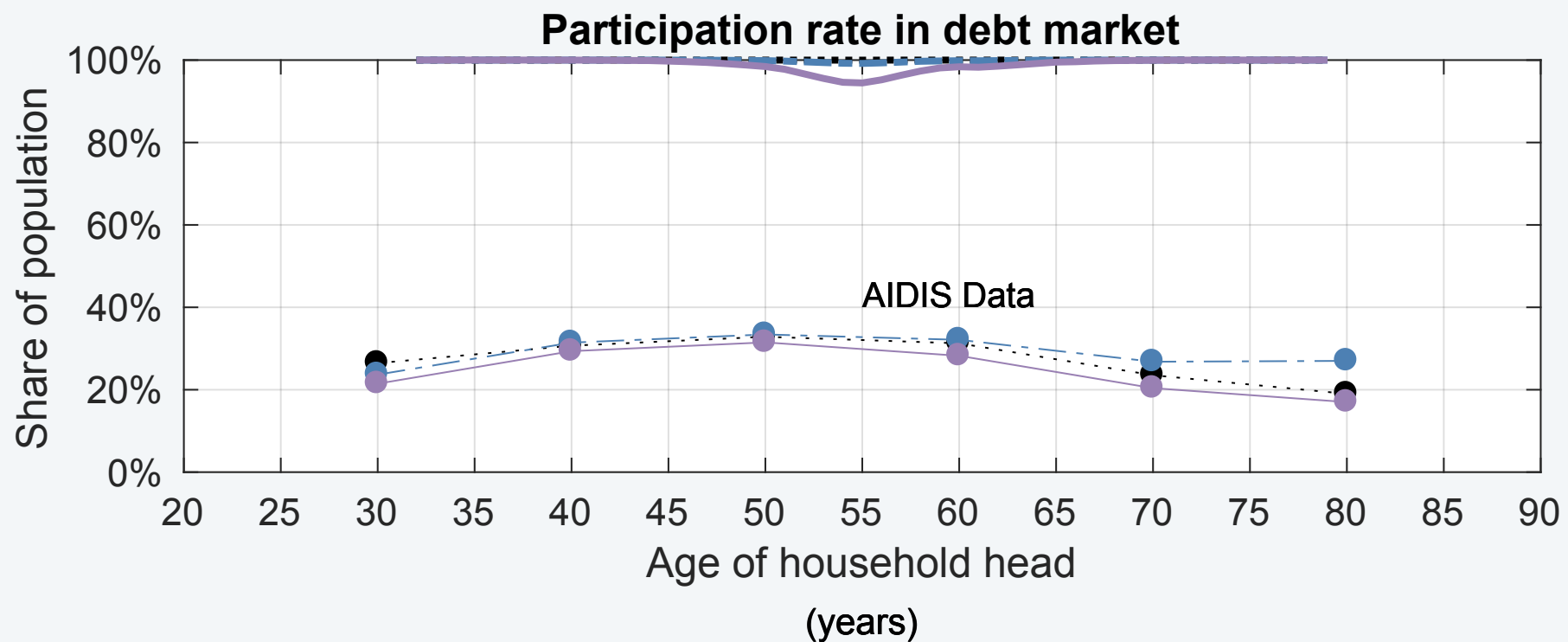
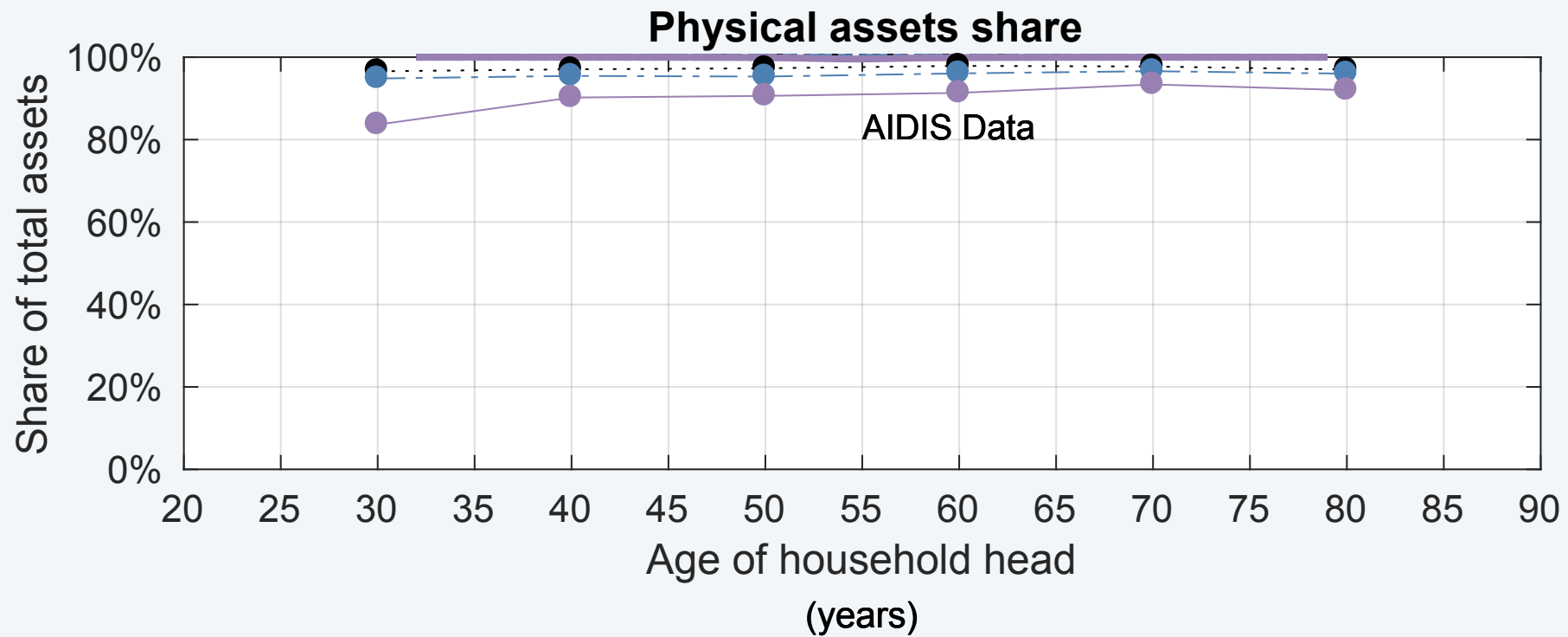
## Advantage to investing in financial assets (return at 6%)



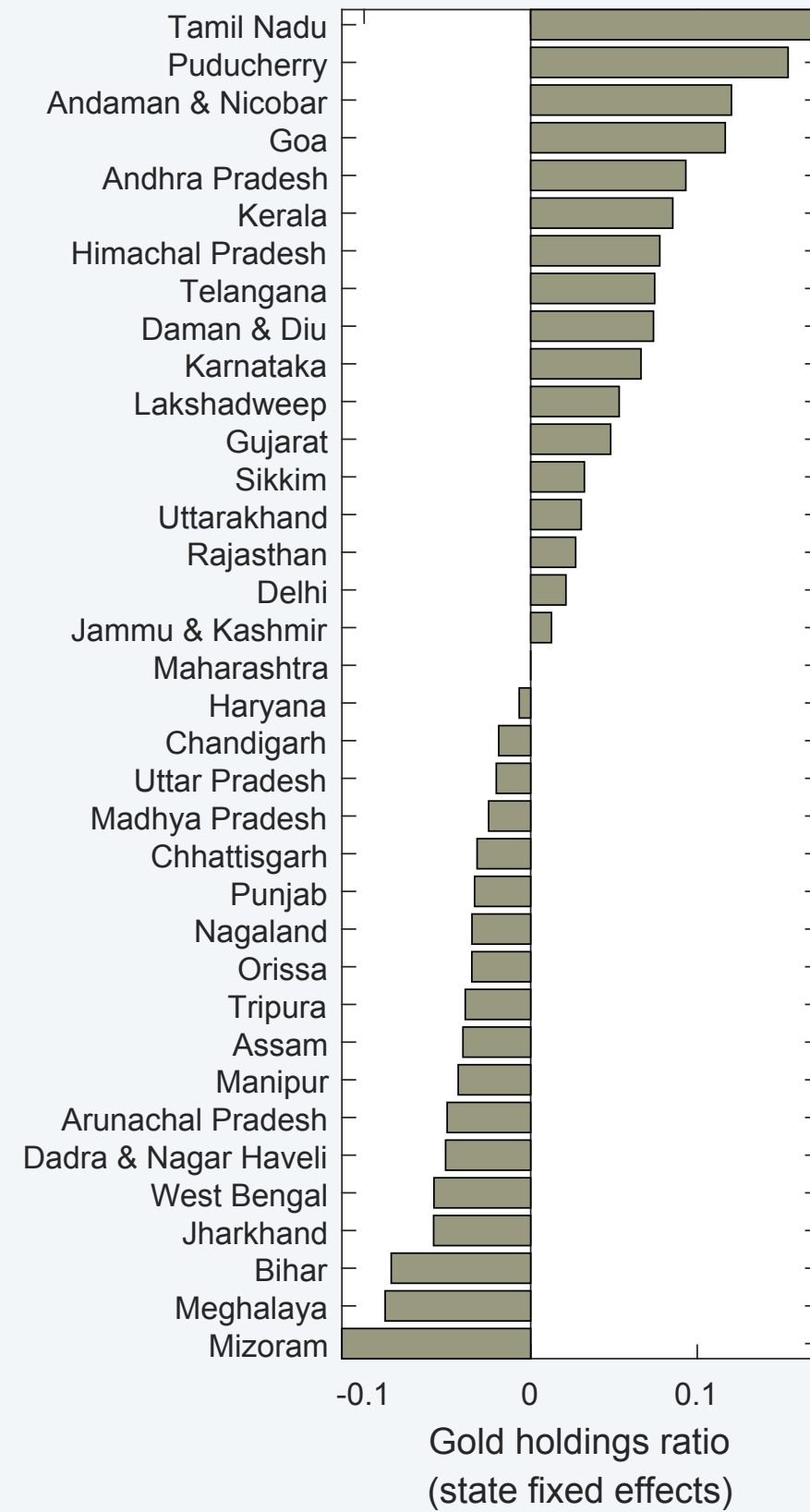
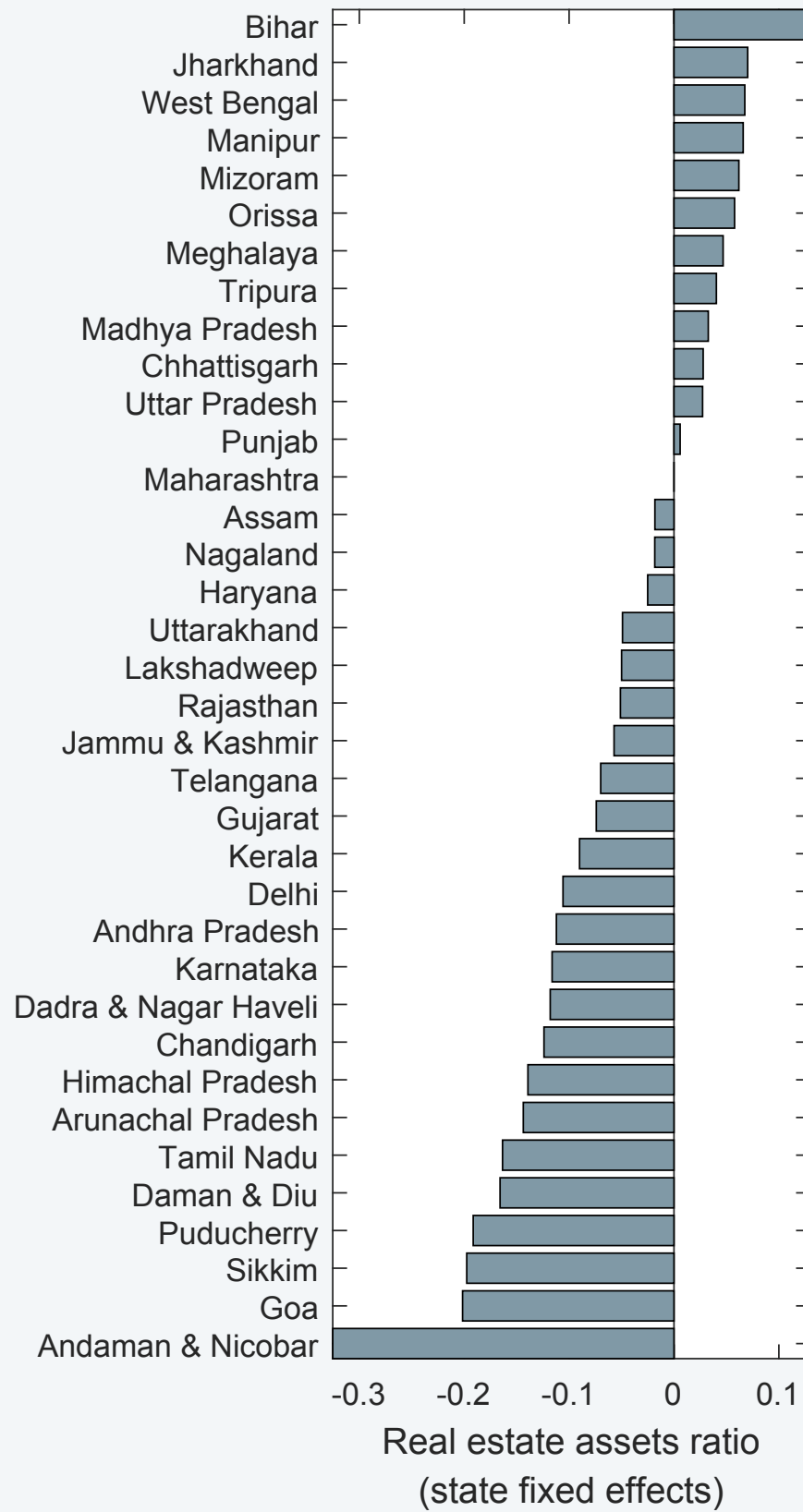


# Optimal allocations

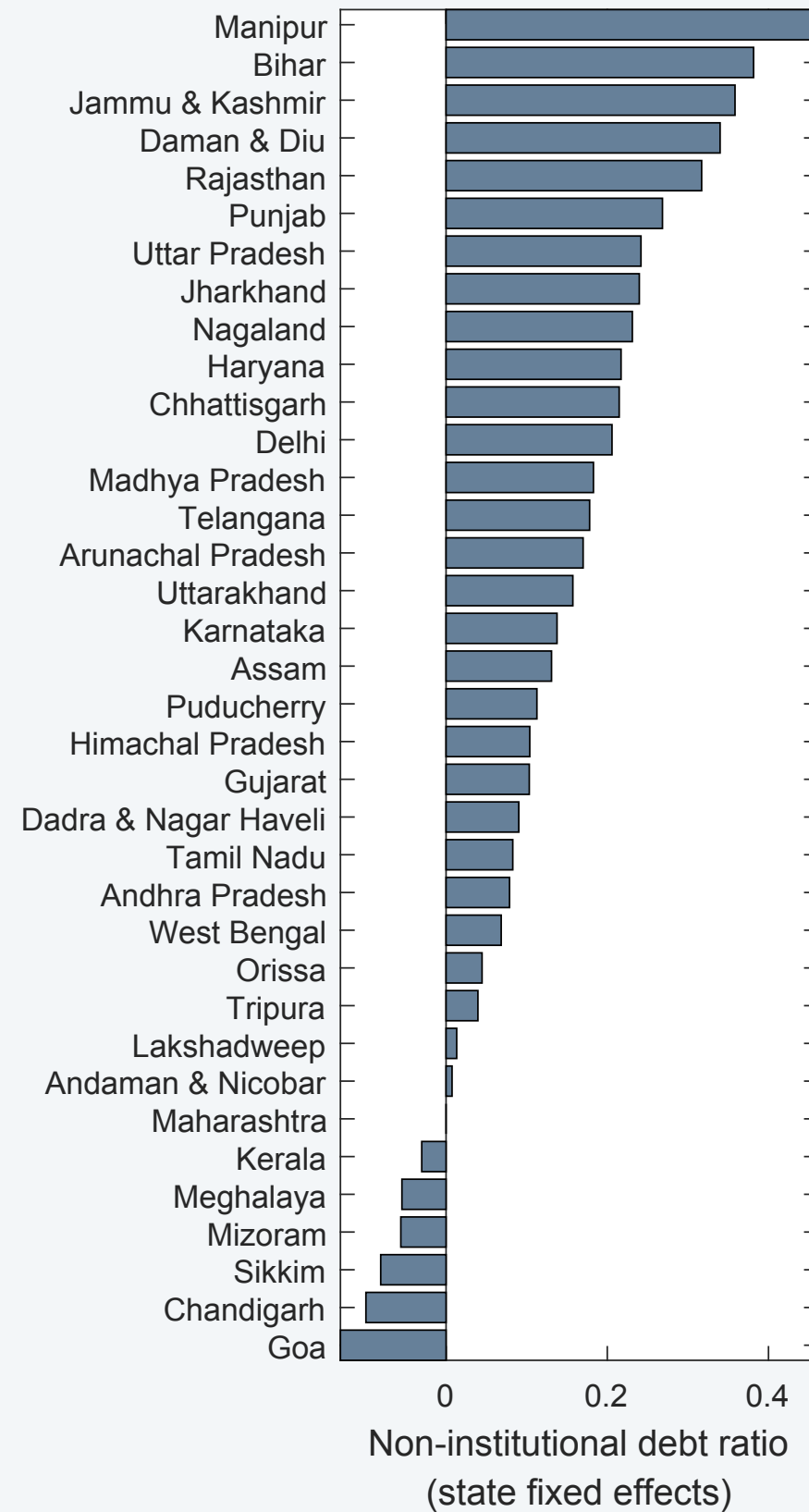
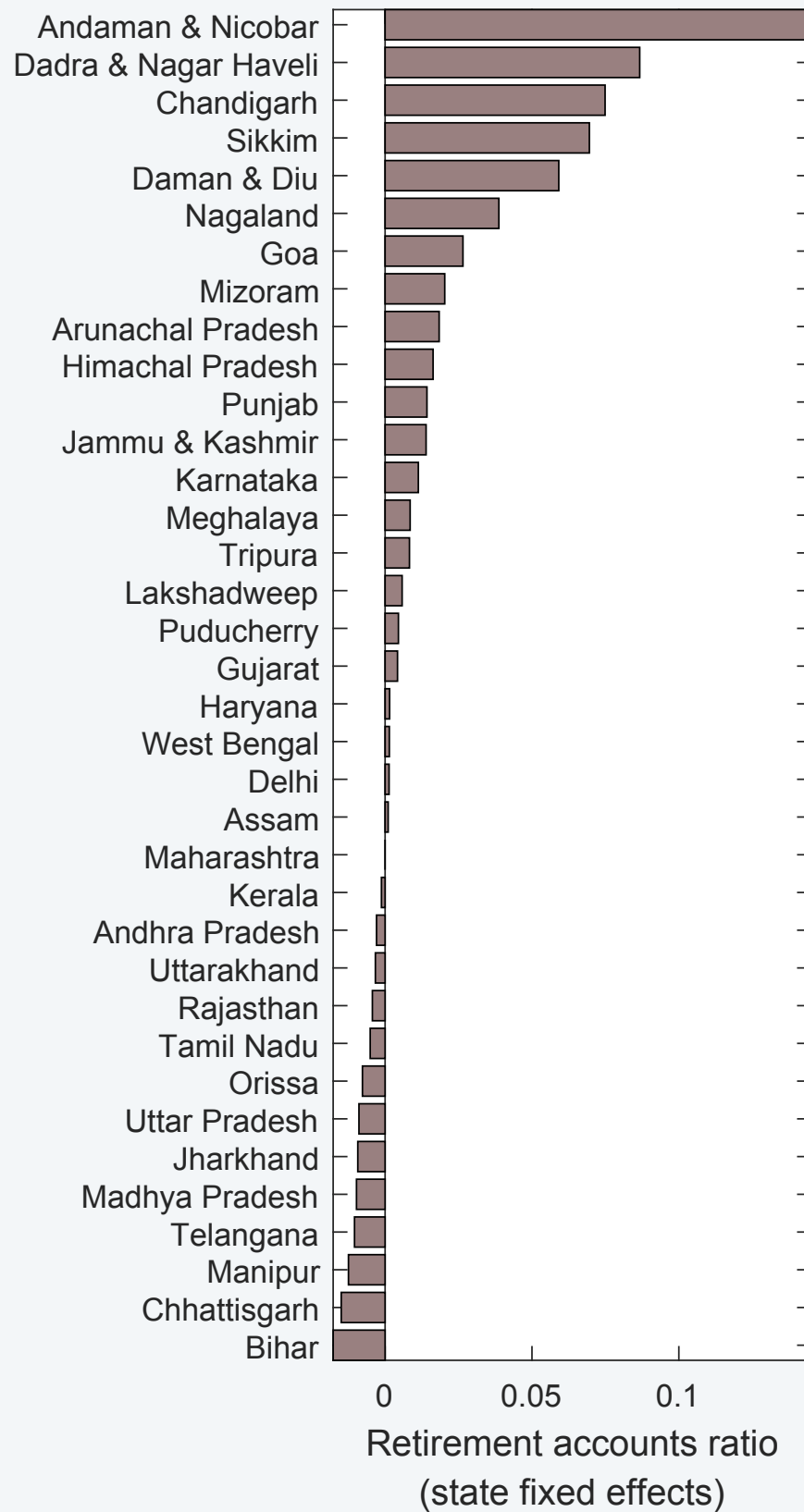
No advantage to investing in financial assets (return at 1%)



# Asset and Debt variation across states

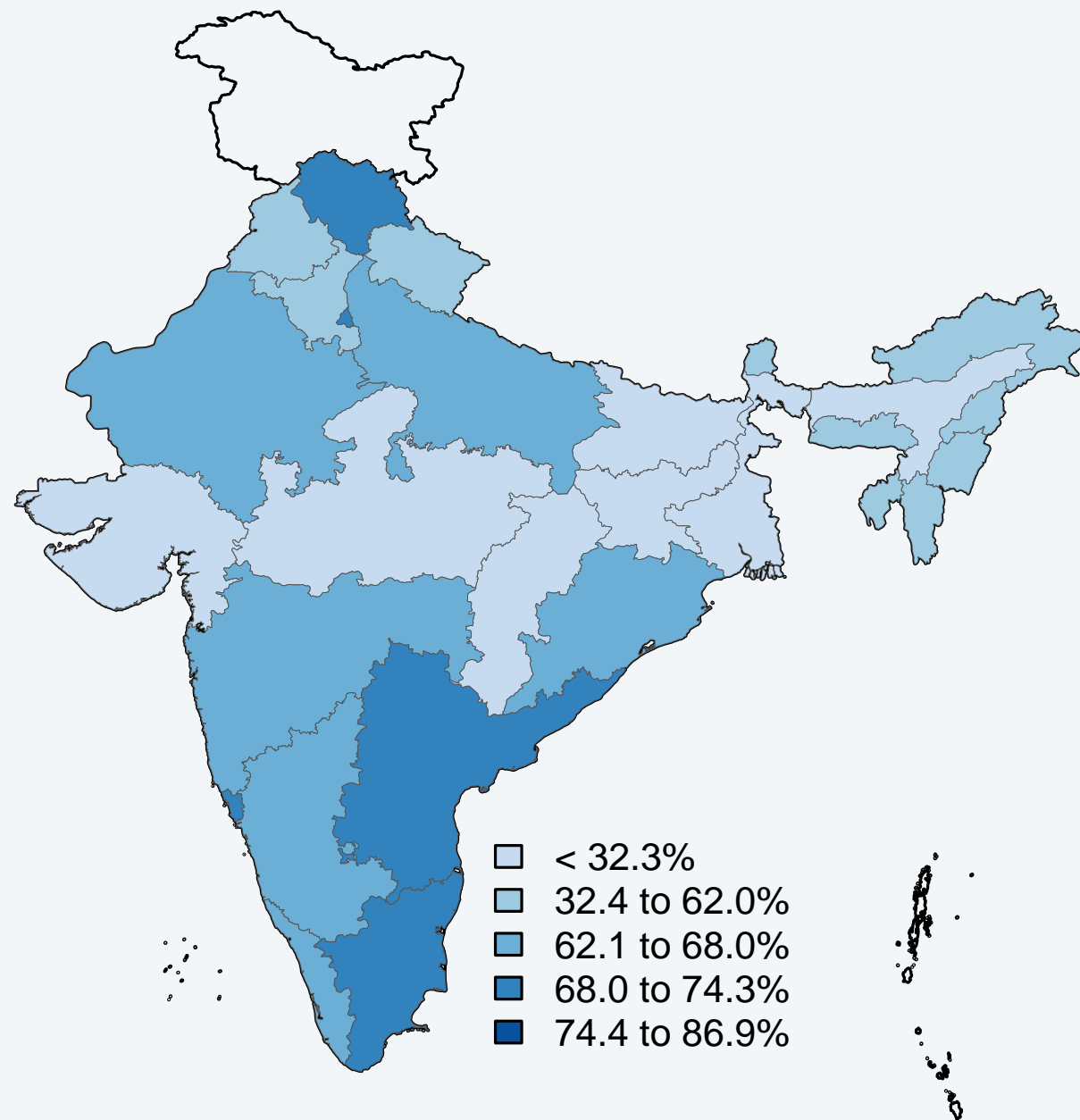


# Asset and Debt variation across states



# Access to Bank Accounts

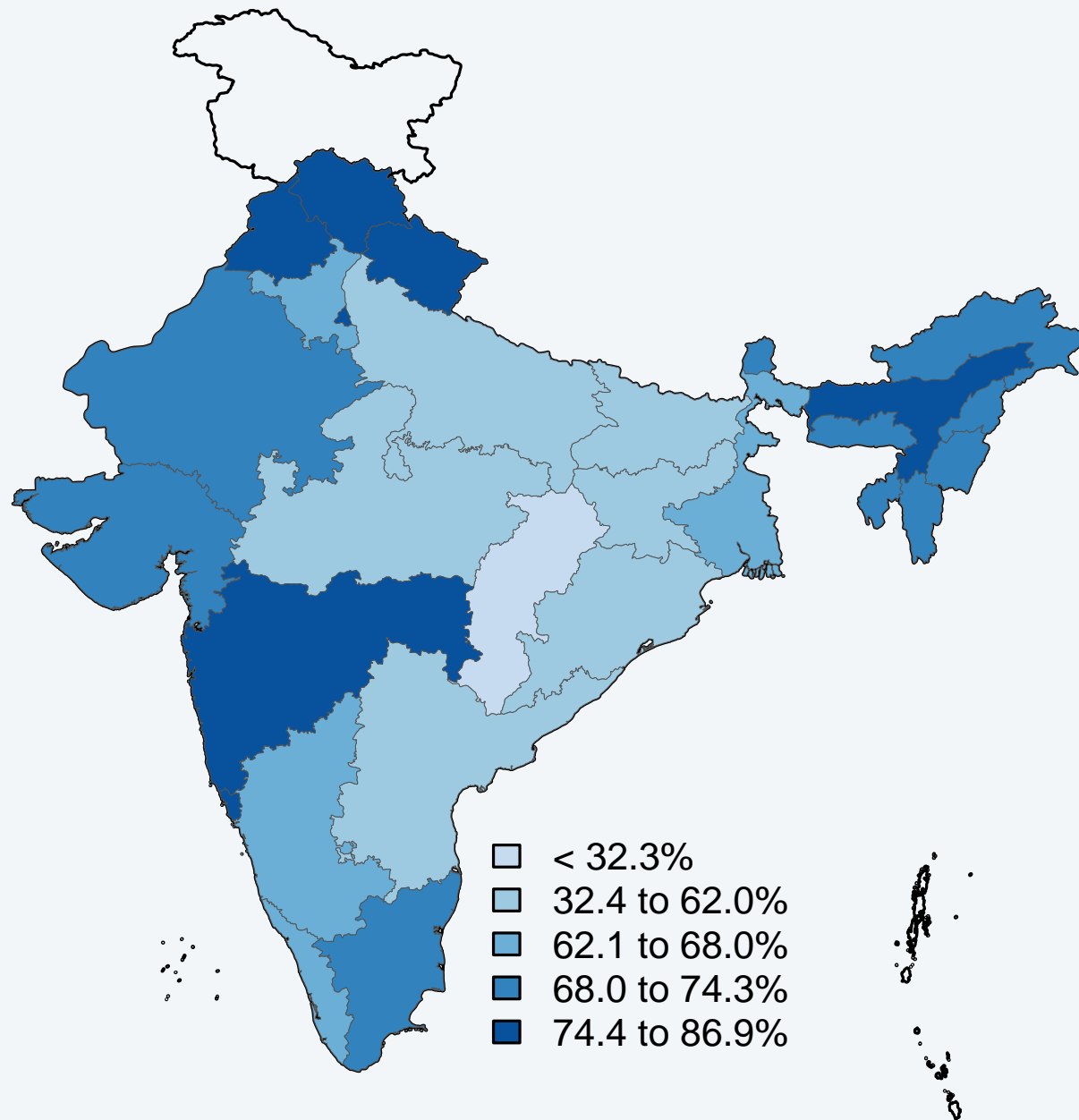
Source: Financial Inclusion Insights Survey, Wave 3, 2015.



- ▶ Access: Have a bank account.
- ▶ Highest access regions: Himachal Pradesh, Tamilnadu, and Goa.
- ▶ Poorest access regions: Jharkhand, Chattisgarh and Gujarat.
- ▶ At least 50% in each state have access.

# Use of Bank Accounts

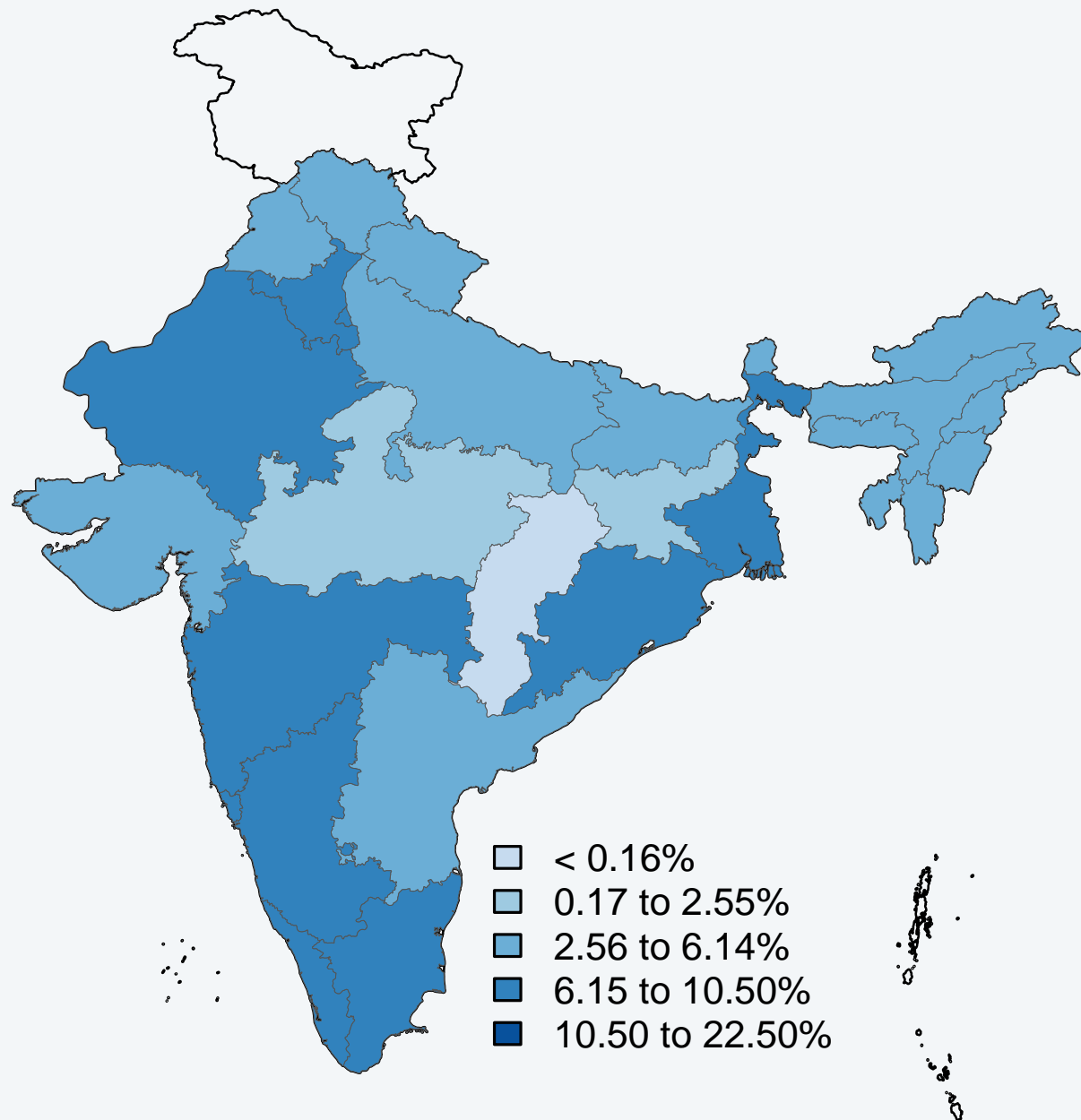
Source: Financial Inclusion Insights Survey, Wave 3, 2015.



- ▶ Use: At least one active use in the past 90 days.
- ▶ Example: Although 58% in Chattisgarh have bank accounts, only 18.30% use them.

# Life insurance penetration

Source: Financial Inclusion Insights Survey, Wave 3, 2015.

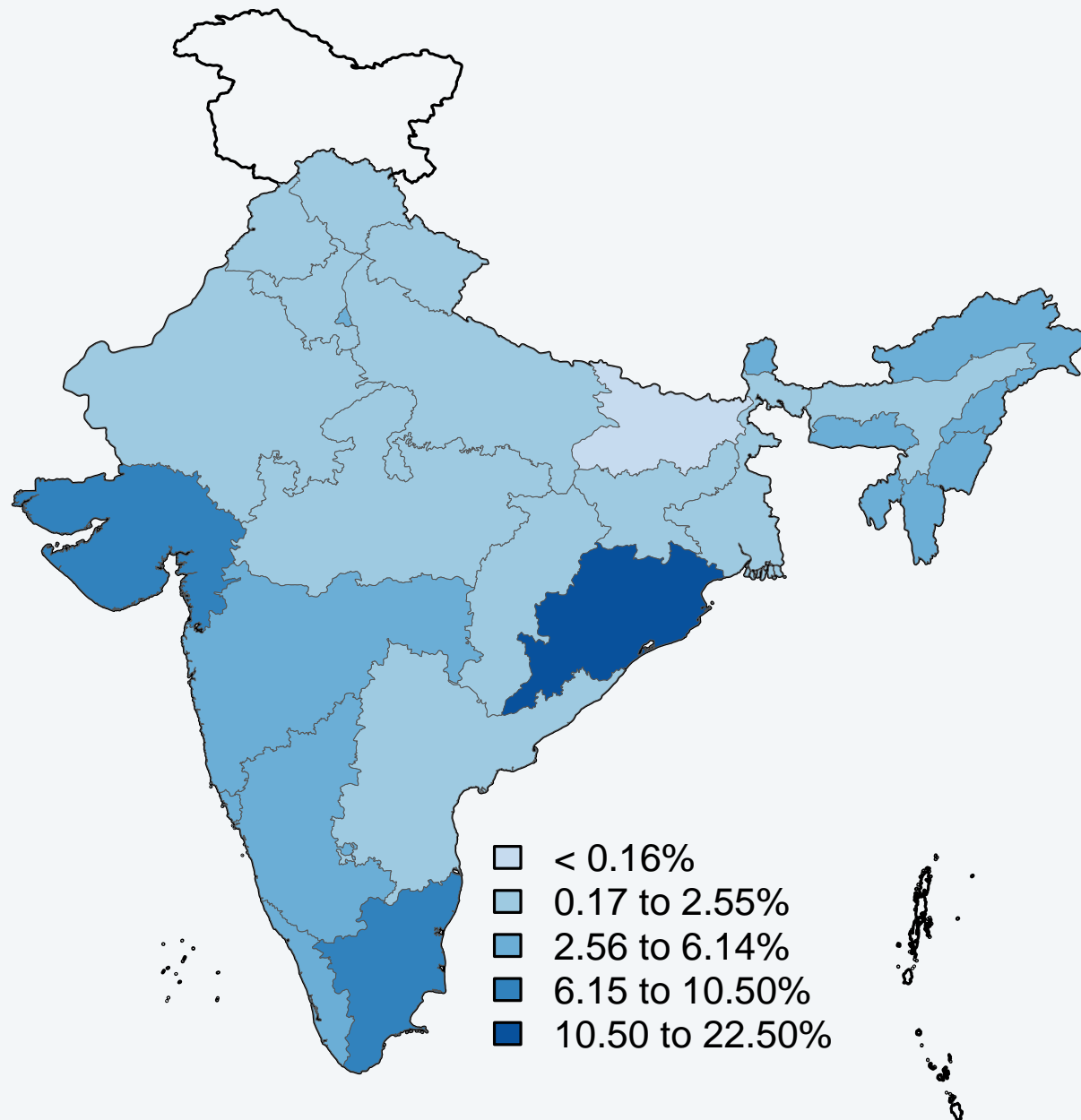


- ▶ Life insurance: Chattisgarh has the lowest rates of penetration (2.15%).
- ▶ Life insurance: Karnataka and Tamilnadu have the highest penetration rates of 22.51% and 17.10%.
- ▶ US: 59% (Prudential)

# Non-Life insurance penetration

Source: Financial Inclusion Insights Survey, Wave 3, 2015.

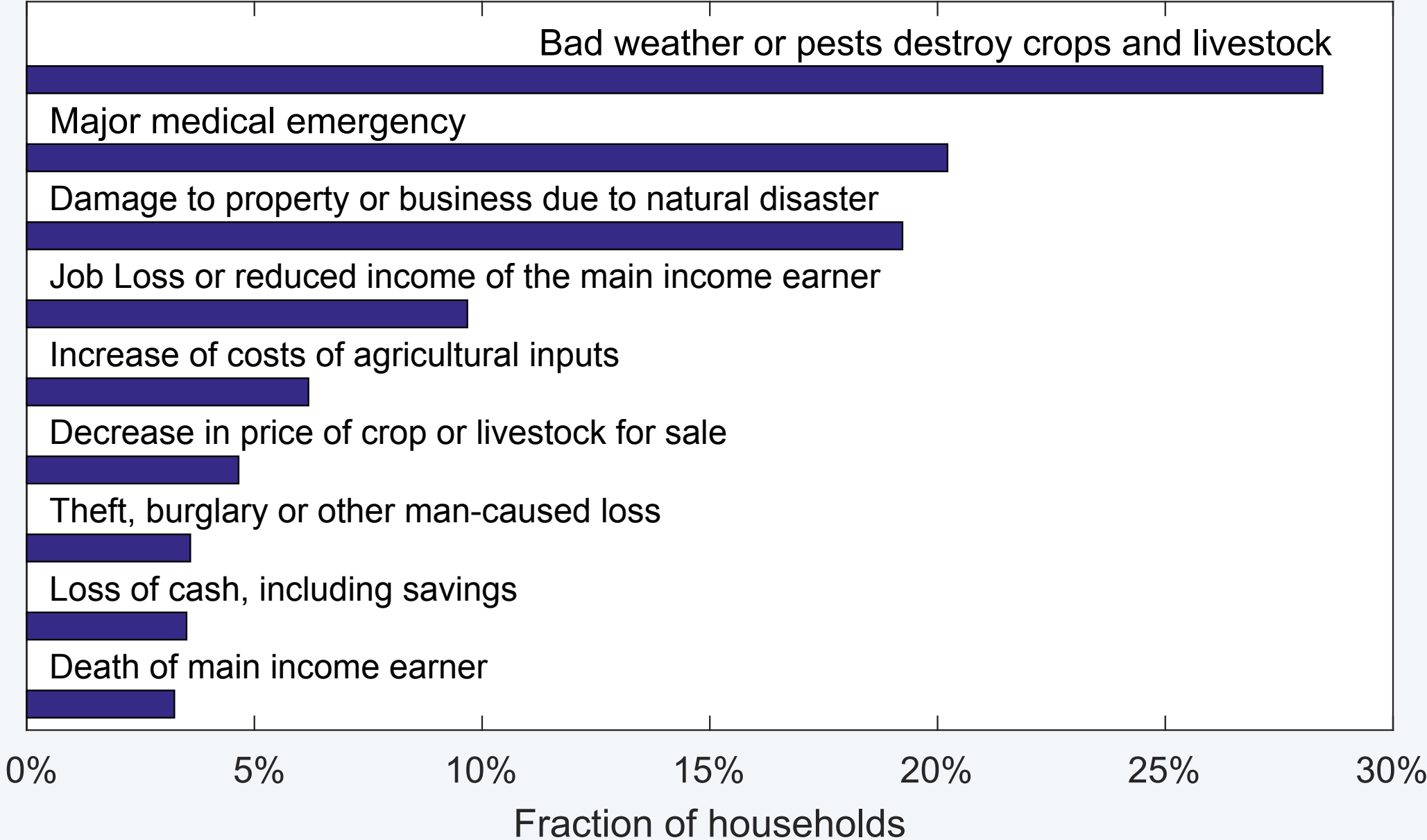
- ▶ Non-life insurance: National average in single digits.
- ▶ Non-life insurance: Jharkhand, Bihar, UP, Himachal Pradesh less than 1% penetration rates.



# Household behaviour: Understanding the risks

Source: Financial Inclusion Insights Survey.

## Sources of risk for Indian households

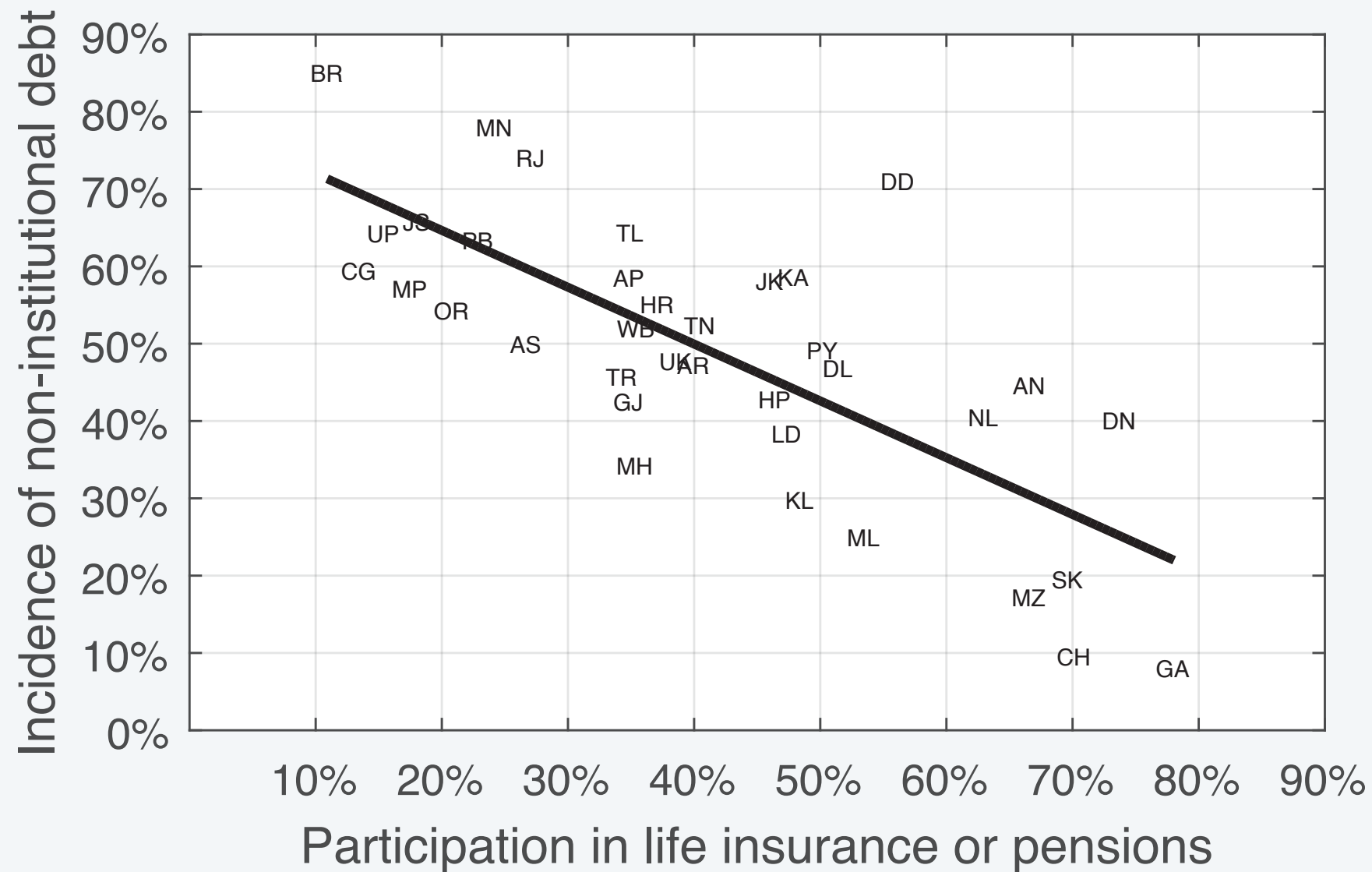




# Household behaviour: Financial decisions

Source: All-India Debt and Investment Survey.

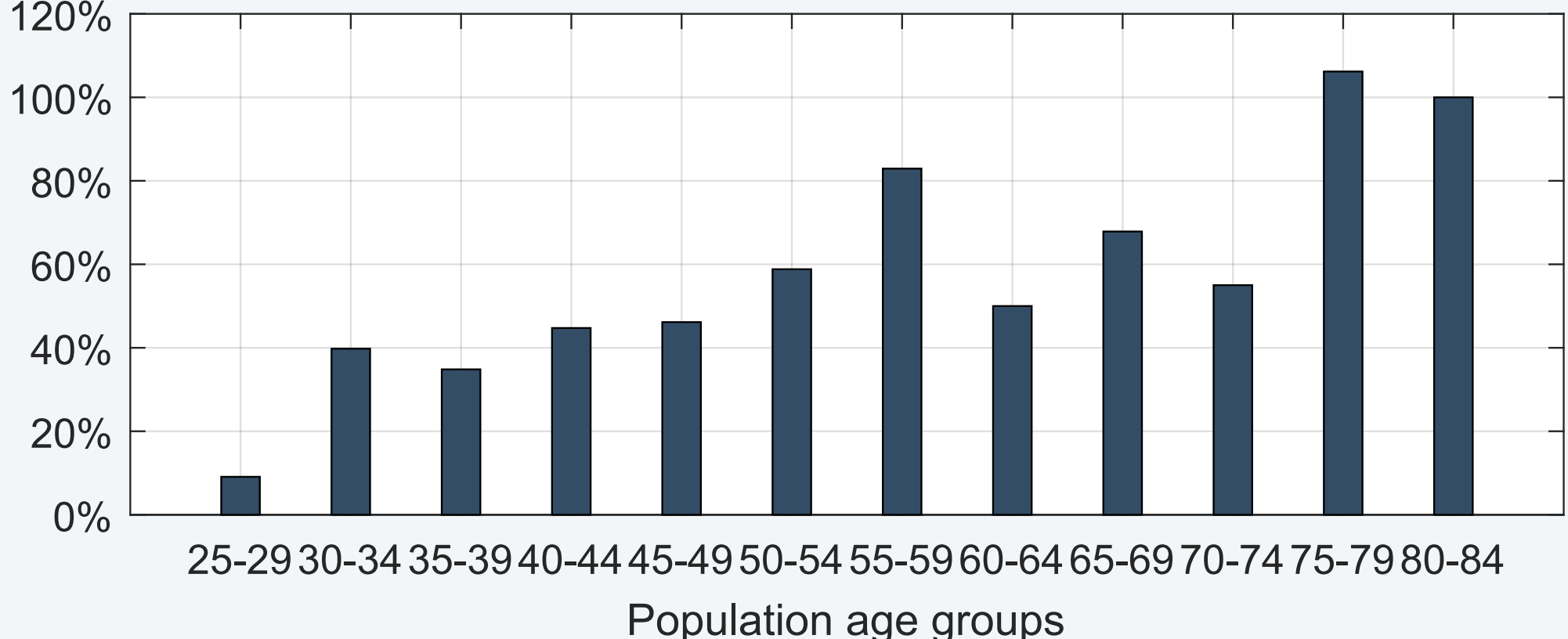
## Substitution effect between insurance products and non-institutional debt



# Medium-term projections

Source: Centre for Development Studies, Tiruvananthapuram, India

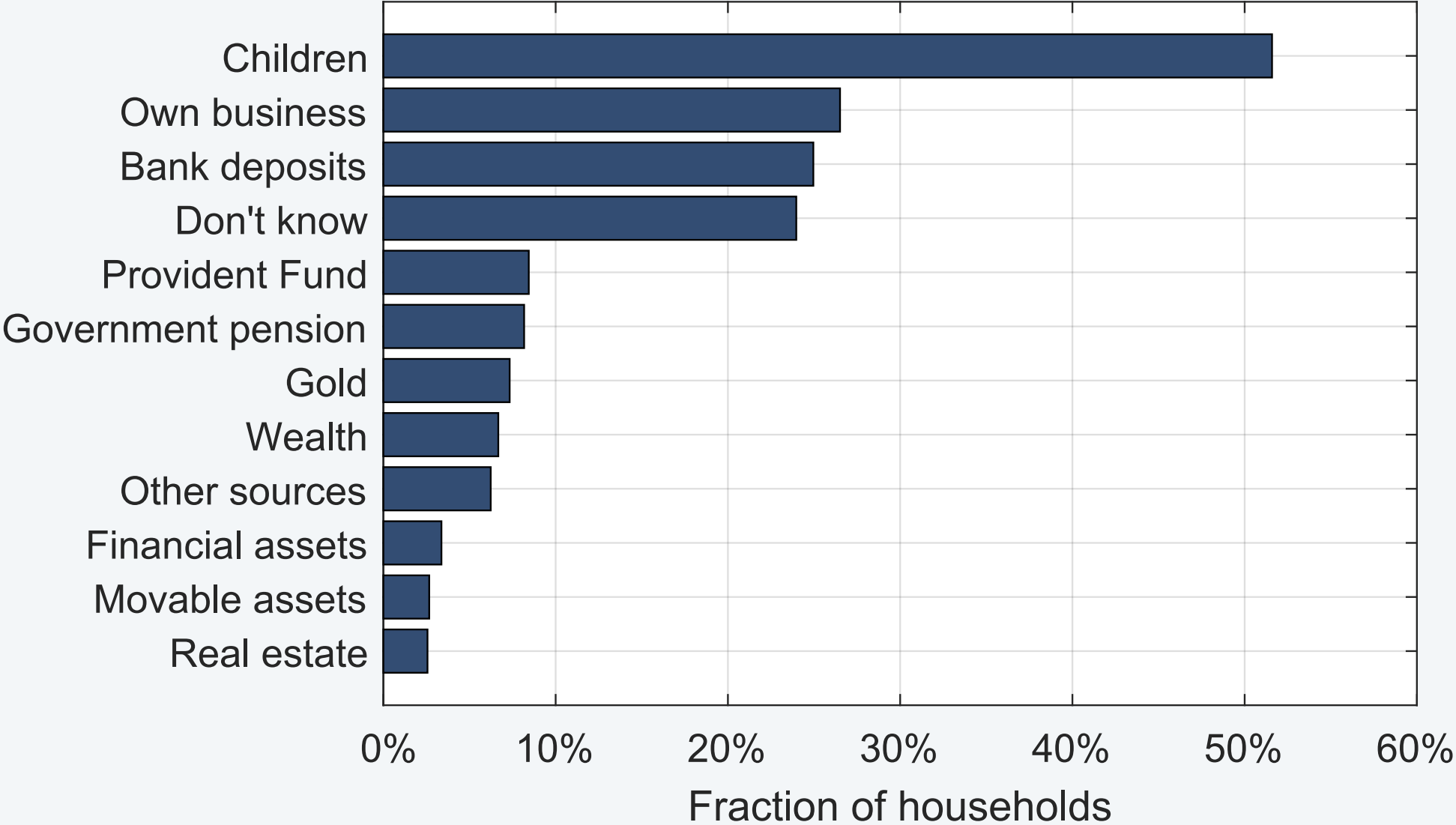
## Predicted relative change in population



# Medium-term projections

Source: ICE 360 Degrees National Household Survey

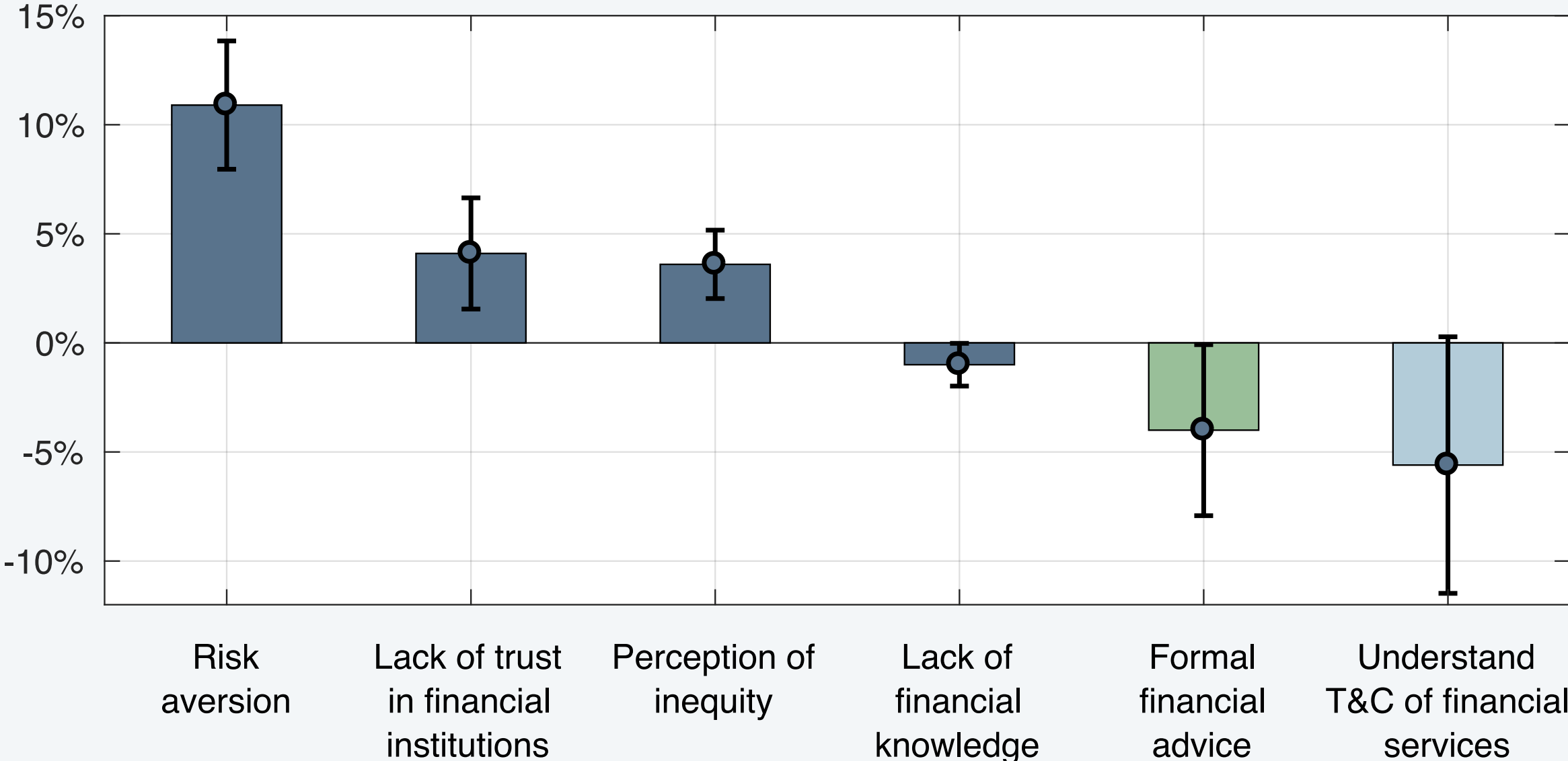
## Sources of funds in retirement



# Potential explanations for observed allocations I

Sources: Financial Inclusion Insights Survey, ICE360 Survey, Finscope.

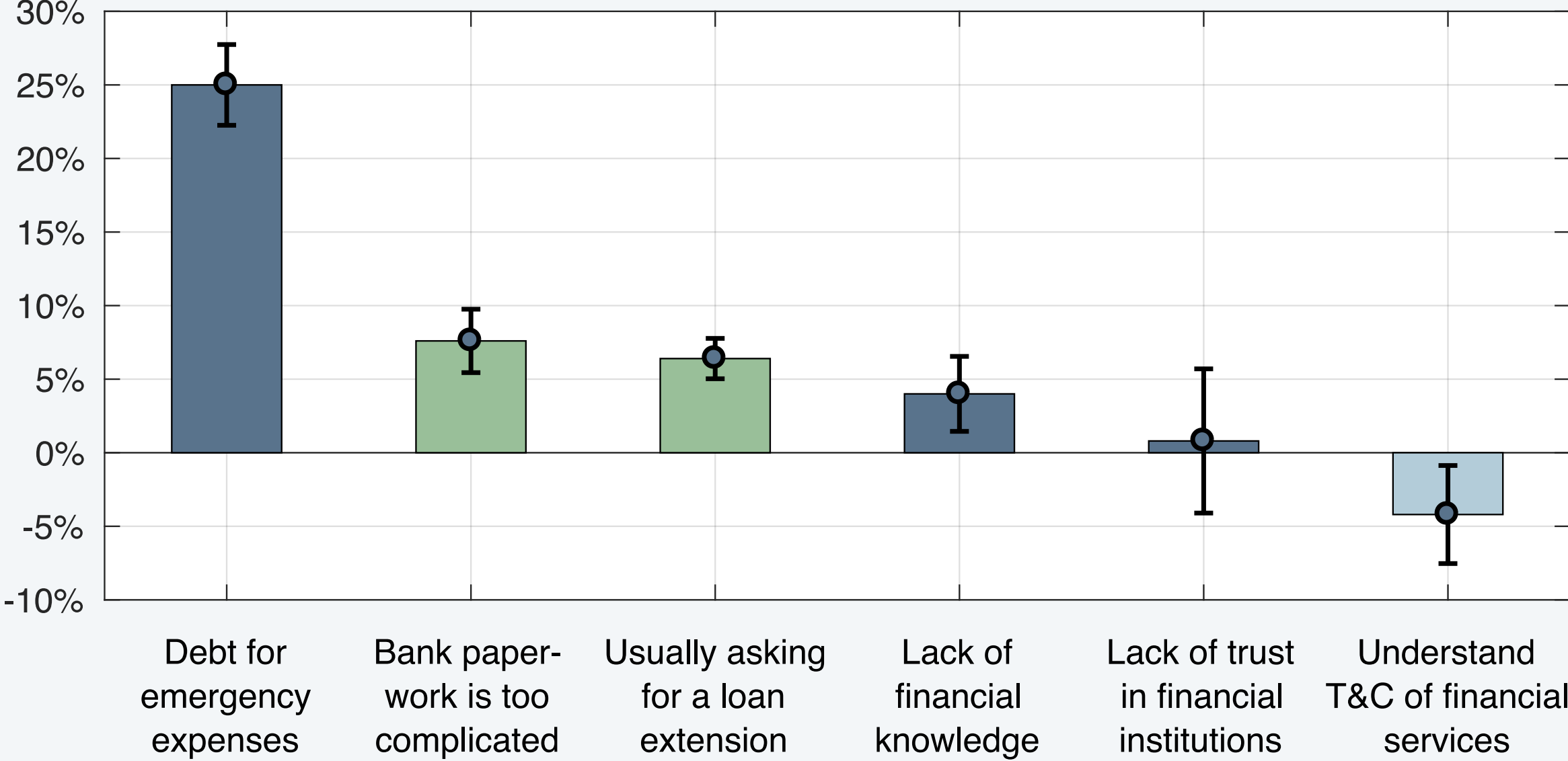
## Gold holdings



# Potential explanations for observed allocations II

Sources: Financial Inclusion Insights Survey, ICE360 Survey, Finscope.

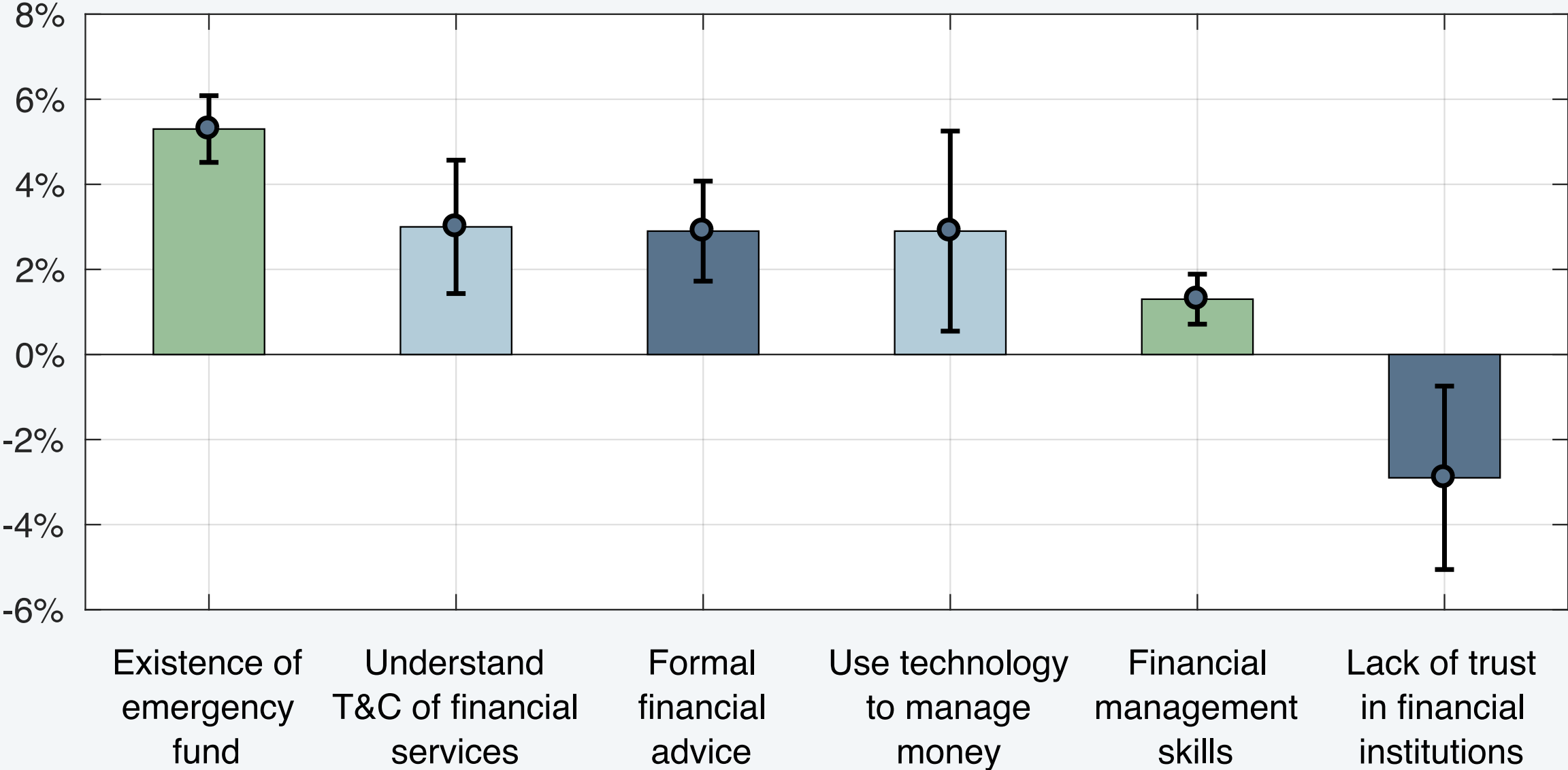
## Non-institutional debt



# Potential explanations for observed allocations III

Sources: Financial Inclusion Insights Survey, ICE360 Survey, Finscope.

## Life insurance



# Financial Capabilities

Source: Financial Inclusion Insights Survey, Wave 3, 2015.

Question		Correct	False	Don't Know
<b>Basic Numeracy</b>				
	Imagine you have 100 Rupees. Somebody gave you 20 Rupees. How much total money will you have?	95.1%	1.8%	3.1%
	Imagine you have 100 Rupees and you have to divide it among 5 people. How much money will each person receive if you divide it equally?	90.3%	3.6%	6.1%
<b>Compound Interest</b>				
<b>Savings</b>	Imagine you have 100 Rupees in your savings account. Your account is earning 2% interest every year. How much money will you have on your account in 5 years if you do not withdraw anything during that period?	69.1%	11.3%	19.6%
<b>Loans</b>	Now, imagine you took a loan of 100 Rupees for 1 year and you have to pay an interest of 2% each month until you fully repay it. How much total money will you have to repay in 1 full year (12 months)?	65.7%	11.4%	23.0%

Note: Number of respondents: 45,036

# Financial Capabilities: International Comparison

Source: Financial Inclusion Insights Survey, Wave 3, 2015.

Compound Interest Savings		Correct	False	Don't Know
<b>India</b>		69%	11%	20%
Netherlands		85%	6%	9%
Germany		82%	7%	11%
Indonesia		78%	7%	15%
United States		71%	25%	4%
Japan		71%	16%	13%
Chile		45%	41%	14%
Mexico		45%	53%	2%

Source: Various Micro-surveys



# Pensions

- ▶ Enable digital end-to-end applications for pension products and authorise Aadhaar-enabled enrolment.
- ▶ Ease of switching and choice in annuity plans; segregate annuity investment from insurance investment.
- ▶ Increase transparency in annuity market in terms of expenses, commissions, annual fees and surrender charges.
- ▶ Investigate whether cap on NPS management fees is internationally comparable.
- ▶ Relax mandatory requirement that only point of presence (POP) entities can engage in sales, and allow digital marketing of pensions.

# Insurance I

- ▶ Propose simple home insurance policy covering structure and contents at a low premium.
- ▶ Propose low-cost travel insurance plan for senior citizens.
- ▶ Mandatory catastrophe insurance with automatically triggered pay out in zones with high natural disaster (floods, etc.) risk.
- ▶ Publish highly granular insurance claims statistics in machine readable format.
- ▶ Rationalize distribution incentives, level commissions structures between initial sale and policy renewal, encourage renewal.

# Insurance II

- ▶ Rationalize discrepancy in commissions between products, incentivise purchase of simple term insurance products.
- ▶ Make PoS disclosures simple and comprehensible.
- ▶ Continue clamping down on mis-selling.
- ▶ Permit redress using delegated representatives, especially in rural areas.

# Financial advice

- ▶ Uniform and consistently stringent standards across regulators for provision of financial advice. Insurance and mutual fund intermediaries brought under uniform advisory regulations.
- ▶ Advisory and distribution functions effectively segregated in a manner that avoids conflicts of interest.
- ▶ Unique license number for financial advisors. Information about financial advisors and standards of competence verified and available online.
- ▶ Fiduciary model for advice.

