Does rising income risk lead to better risk sharing?

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The Causes and Consequences of Rising Economic Inequality

Motivating evidence, 1

- Large increase in idiosyncratic earning risk in US over the last 30 years

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	Cross sectional variance(CEX) of within group:	
	Log earnings	Earnings growth
1980-81	26%	40%
2002-03	39%	49%

Motivating evidence, 2

- Very small increase of cross sectional variance(CEX) of within group:

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	Cross sectional variance(CEX) of within group:	
	Log consumption(ND+)	Consumption growth(ND+)
1980-81	36%	33.7%
2002-03	38%	34.3%

Motivating evidence, 3

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Motivating evidence, 3

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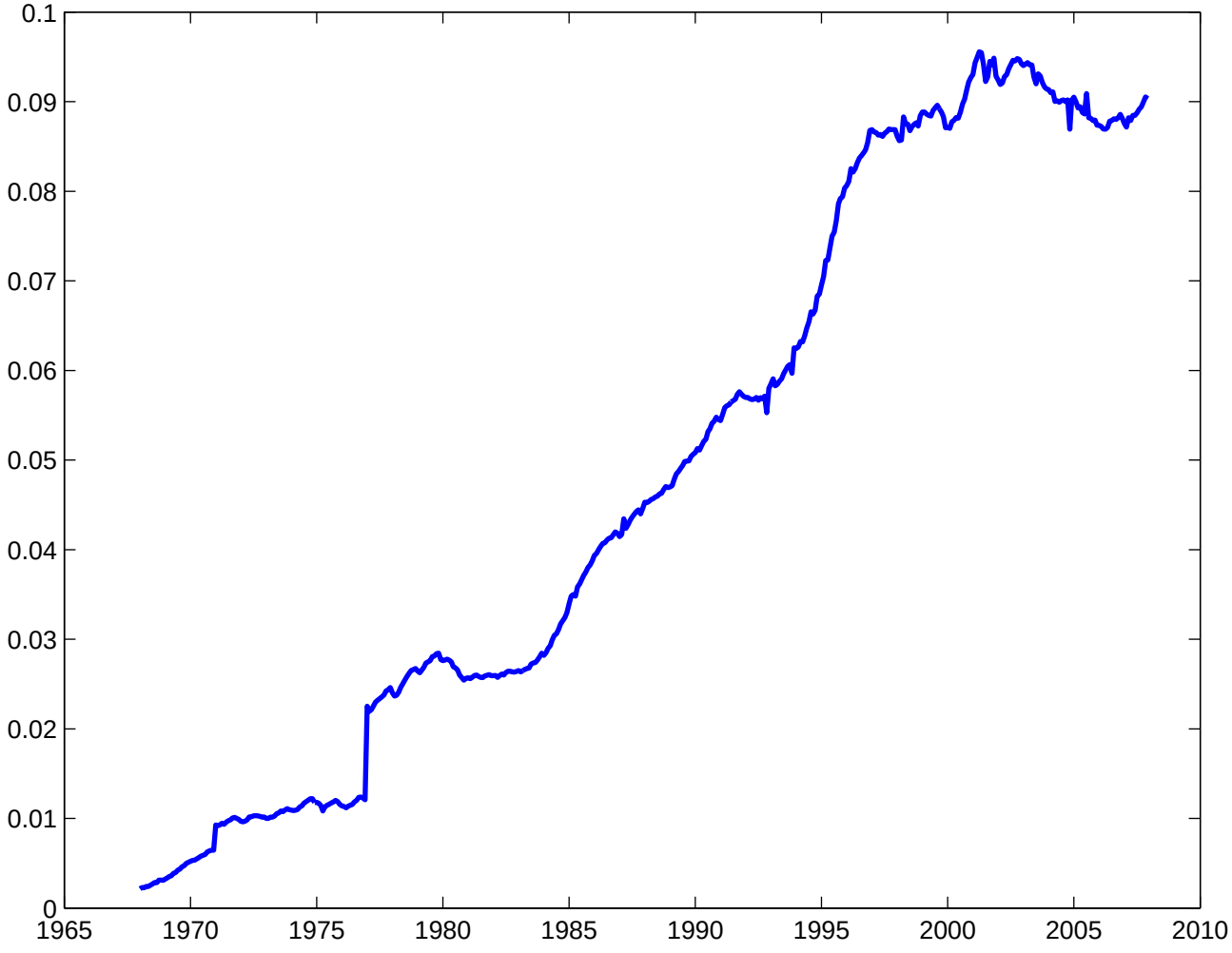
	Lucky Households (top 20% of g. distr)	
	Earnings growth	Consumption growth(ND+)
1980-81	+54%	+6%
2002-03	+59%	+6%
	Unlucky Households (bottom 20% of g. distr)	
	Earnings growth	Consumption growth(ND+)
1980-81	-54%	-9%
2002-03	-57%	-7%

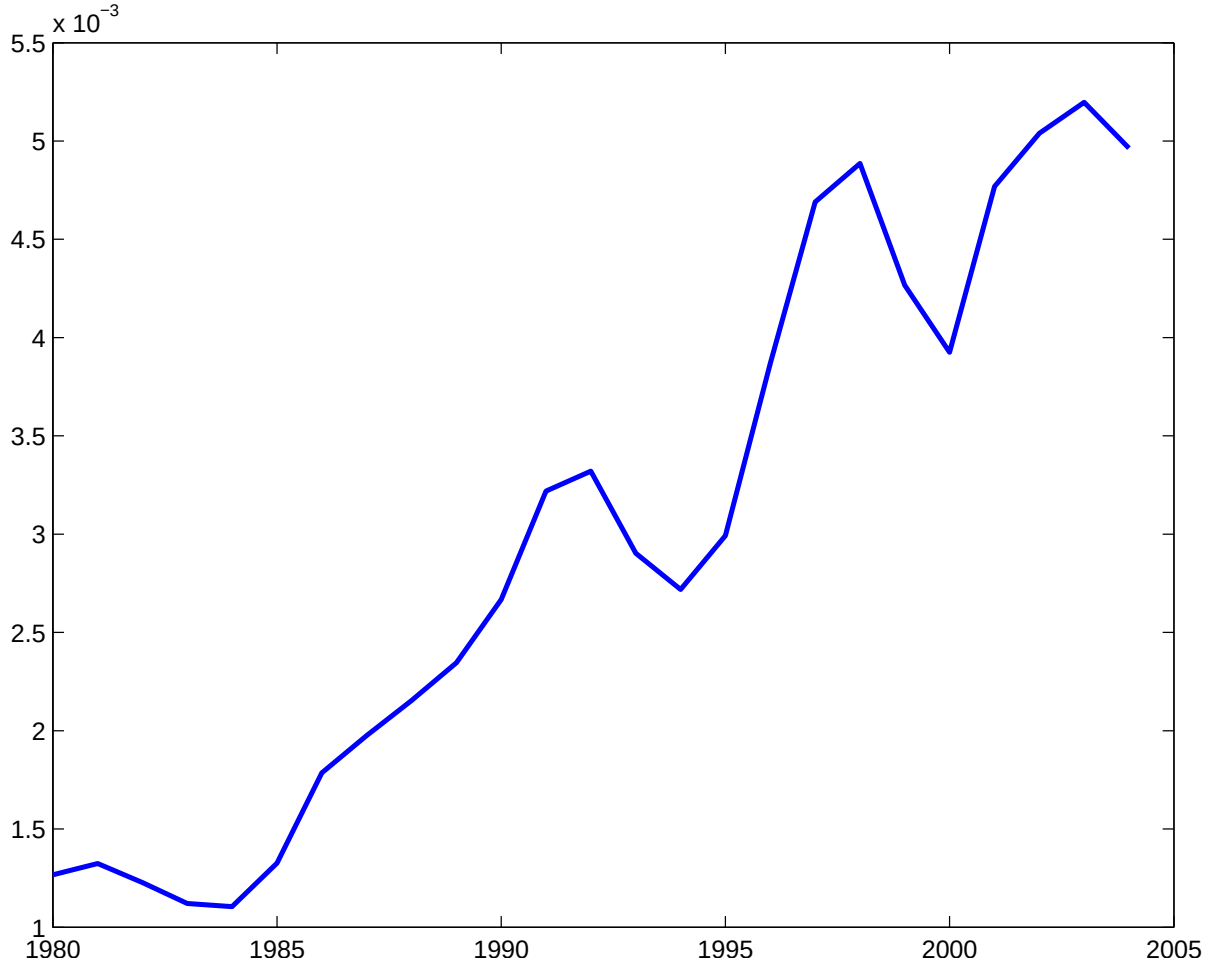
Motivating evidence, 4

Figure 1: Revolving Debt/Disposable Income



Motivating evidence, 5

Figure 2: Chapter 7 Filings Per Capita



The questions

- General
  - What is the welfare impact of the increased risk?

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- Specific
  - Can the increase in income risk explain all the other evidence?
  - Can the increase in income risk + better information in credit markets explain it?

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- Very rich and sophisticated model, technically VERY challenging (Solving for the pricing of debt of many different households is a high dimensional fixed point)

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- Life cycle model with idiosyncratic risk, defaultable non contingent debt and competitive lenders
- Very rich and sophisticated model, technically VERY challenging (Solving for the pricing of debt of many different households is a high dimensional fixed point)
- First compute steady state calibrated to 2000s. High income risk and good information
- Question 1: compare it a steady state with low risk and same information
- Question 2: compare it to a steady state with low risk and low information

Answers to question 1

- Increased income risk does not change bankruptcy rate
- Increased income risk does not change credit, more precisely the fraction of people with with negative asset position (which are at risk of default)
- Increased income risk does translate in increased consumption risk

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Quantitative results should be provided in more systematic fashion

Intuition

- In response to higher income risk, with fixed interest rates households would default more
- But lenders, anticipating this, increase interest rates
- Default rates, measure of borrowers and total negative asset positions unaffected or falling (Livshits, MacGee and Tertilt, 2007)

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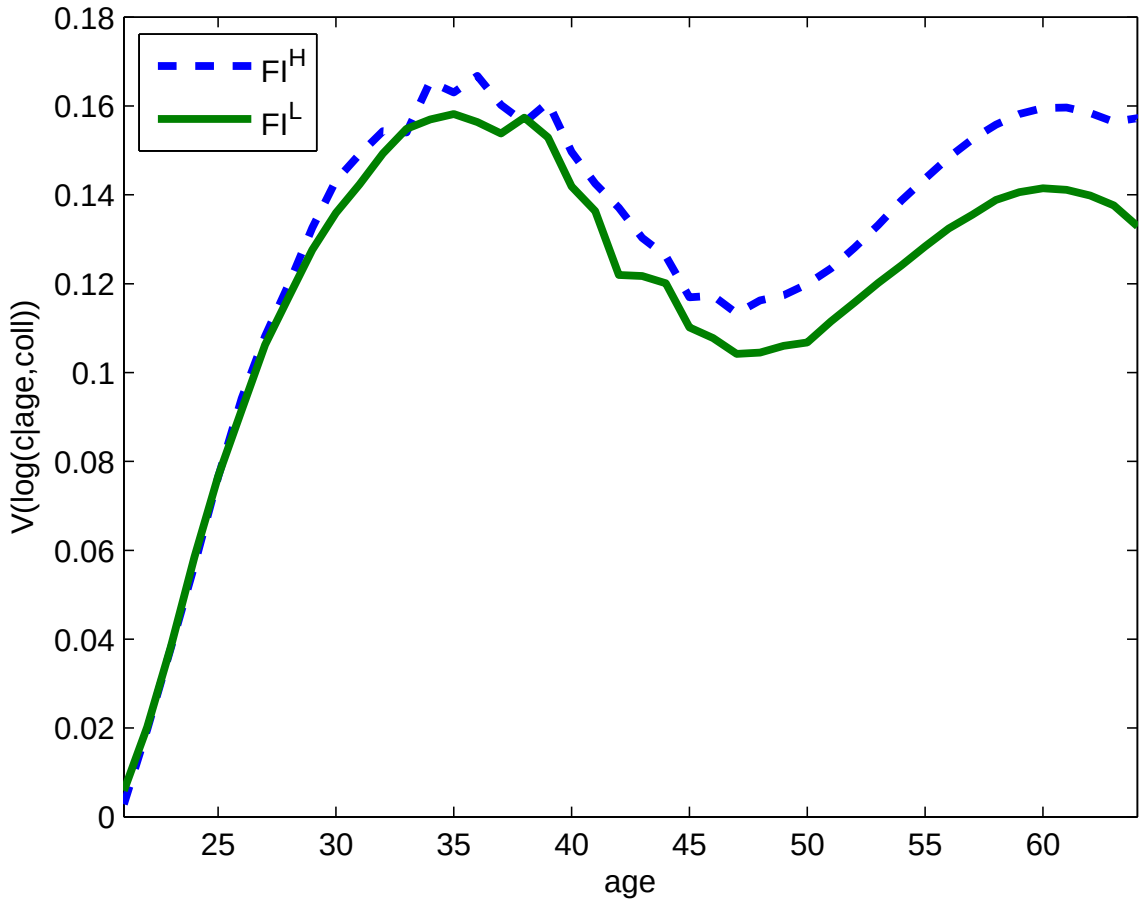
- In response to higher income risk, with fixed interest rates households would default more
- But lenders, anticipating this, increase interest rates
- Default rates, measure of borrowers and total negative asset positions unaffected or falling (Livshits, MacGee and Tertilt, 2007)
- In order to get default rates and credit to go up at the same time need improvements in the credit technology (Athreya, Tam and Young 2007, Drozd and Nosal, 2008)

The impact on risk sharing, 1

Figure 11: Increased Income Risk, Bankruptcy



The impact on risk sharing, 2

- Consumption risk goes up in response to increased income risk
- It goes up almost 1 to 1 with income risk
- Not consistent with consumption evidence

Punchline of paper

- Increase in bankruptcy activity not a major force in understanding why consumption risk has not changed in response to income risk

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- Increase in bankruptcy activity not a major force in understanding why consumption risk has not changed in response to income risk
- Could have been anticipated by the small scale of bankruptcy (in the order of 1% of population)

Credit

- What about the increase in unsecured credit?
- The model is mostly silent about it, as in the data most of credit is used by households with positive asset positions

What is missing in the model?

- Three possibilities
  - The role of assets as buffer against income fluctuations
  - More sophisticated insurance markets
  - Creation of credit markets

Assets as buffer stocks

- If majority of agents hold some assets, can use them as buffer against fluctuations
- Very effective mean of absorbing persistent (not fully permanent) income shocks
- Consumption risk still increases but very little so a life-cycle model with idiosyncratic risk can be consistent with consumption evidence (Heathcote, Storesletten and Violante, 2006)

Why this does not work here?

- Most wealth is held by "special agents"
- Normal agents have little wealth so cannot use buffer very effectively
- Problem with that is that it yields a counterfactually high level of consumption risk!

Consumption risk over the lifecycle: model

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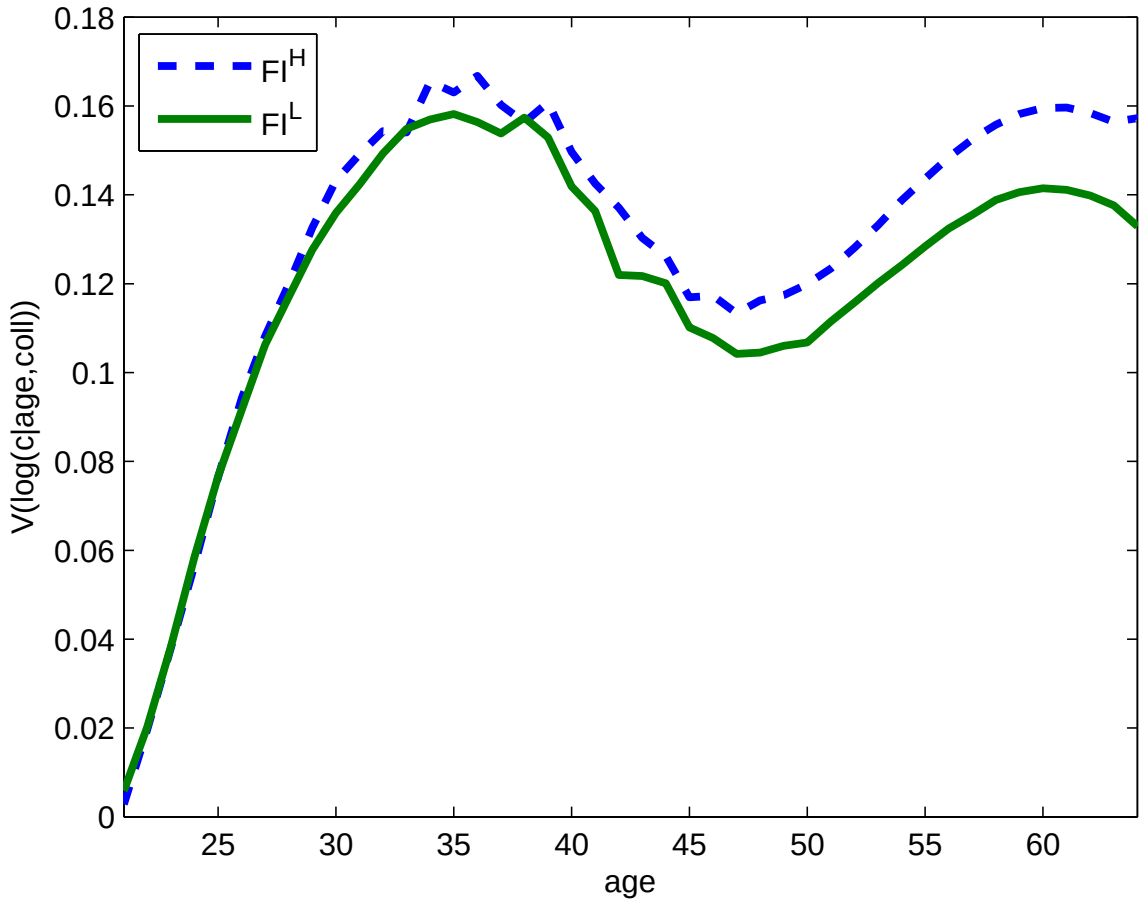

Consumption risk over the lifecycle: data US

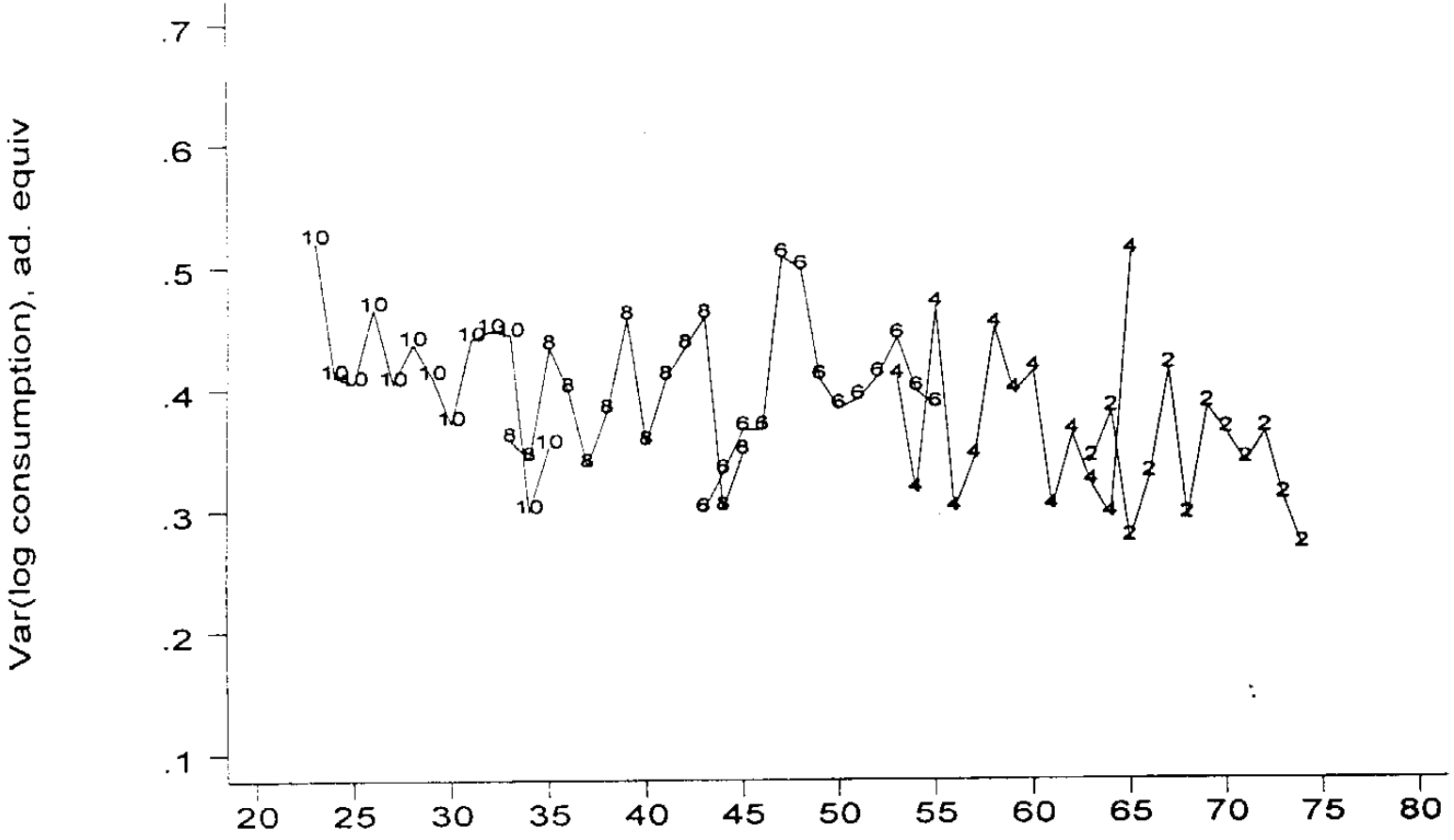

Figure 5: United States

Consumption risk over the lifecycle: data UK

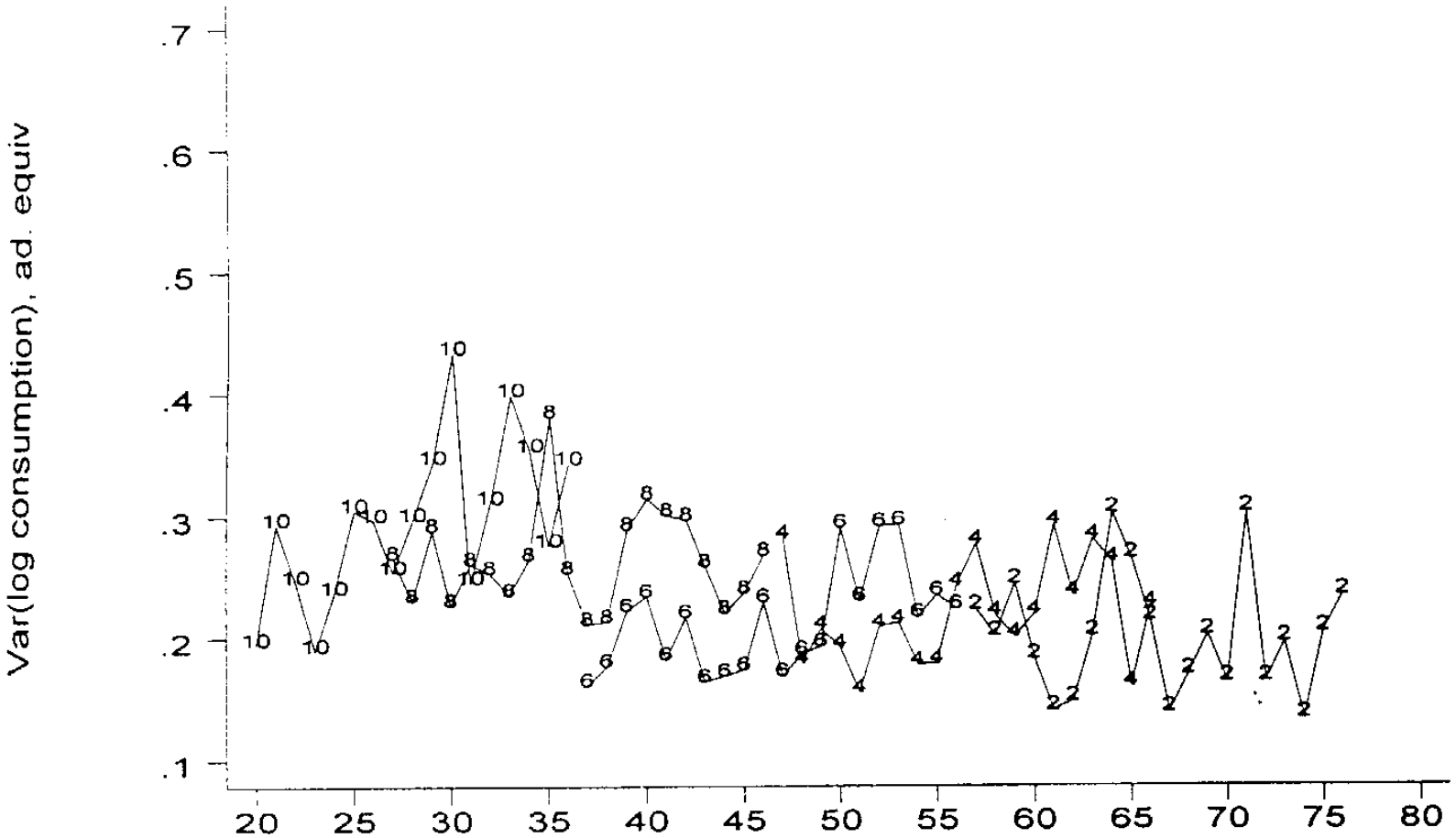

Figure 4: United Kingdom

Consumption risk over the lifecycle: data Ita

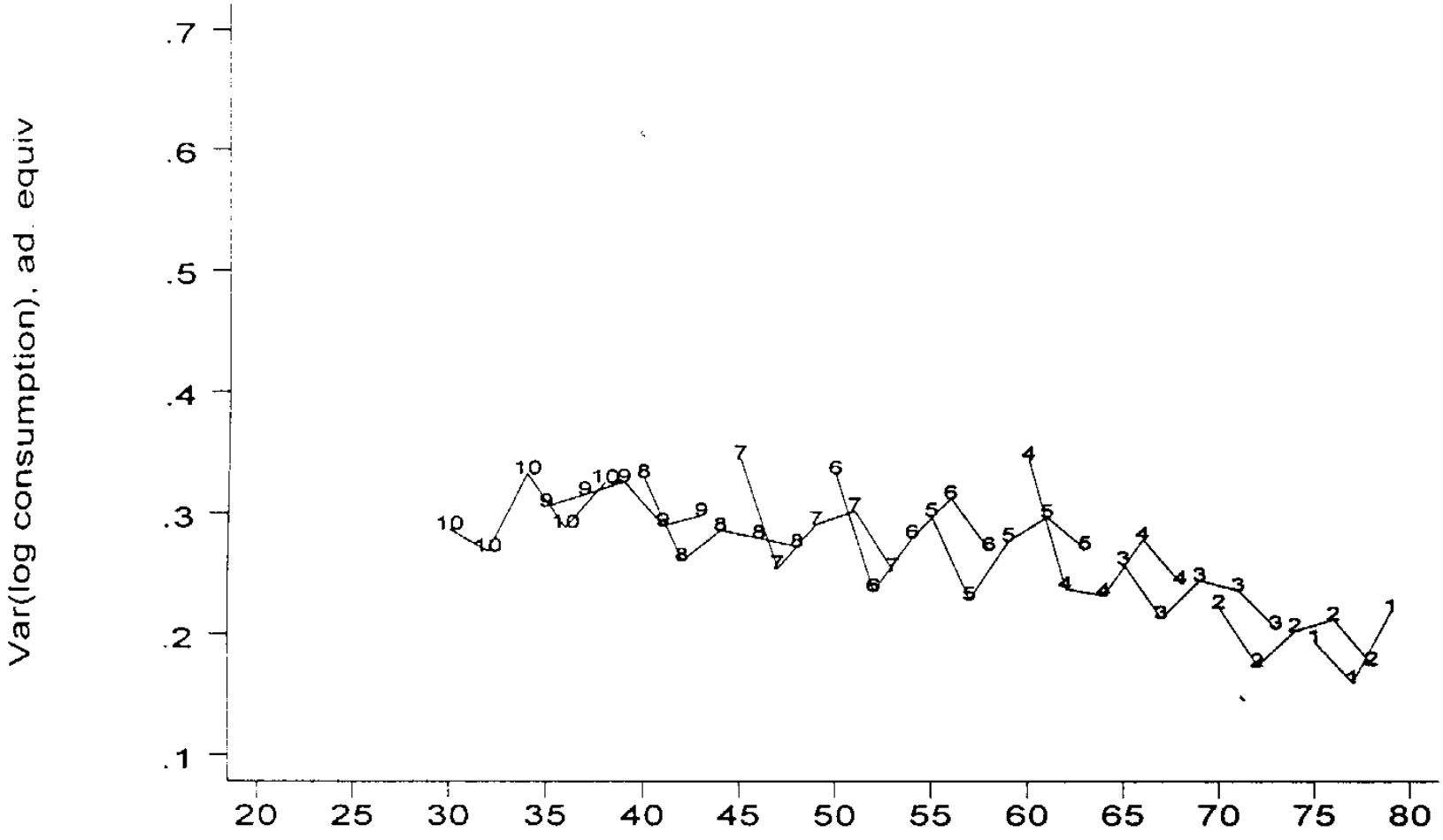

Figure 6: Italy

More sophisticated asset markets

- Consider a world in which contingent borrowing is constrained by limited enforcement (Kehoe Levine)
- Punishment for default is exclusion so increased risk leads to higher punishment and expansion of credit limits
- With low risk default incentives increase more than default penalties so consumption risk increasing in income risk
- With high risk default incentives increase less than default penalties (concavity), so consumption risk decreasing in income risk

Creation of asset markets

- Improvements in information (this paper)
  - With low information unsecured credit is basically shutdown (credit is 0.1% of income)
  - More info creates a market and improves welfare
  - Not necessarily connected to increased income risk

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- Improvements in information (this paper)
  - With low information unsecured credit is basically shutdown (credit is 0.1% of income)
  - More info creates a market and improves welfare
  - Not necessarily connected to increased income risk
- Fixed costs of establishing a credit market (the unsecured market)
  - As income risk goes up more demand for flexible credit
  - If demand if sufficiently high market is established
  - Improve ability of agents to use their assets as buffer
  - Need a theory of assets with different liquidity

Conclusion

- Paper at the technical frontier of quantitative macro
- Main contribution is to show that bankruptcy is not essential for understanding how increased income risk affects consumption risk
- It addresses a slightly narrower question than promised in the title