Risk and the family

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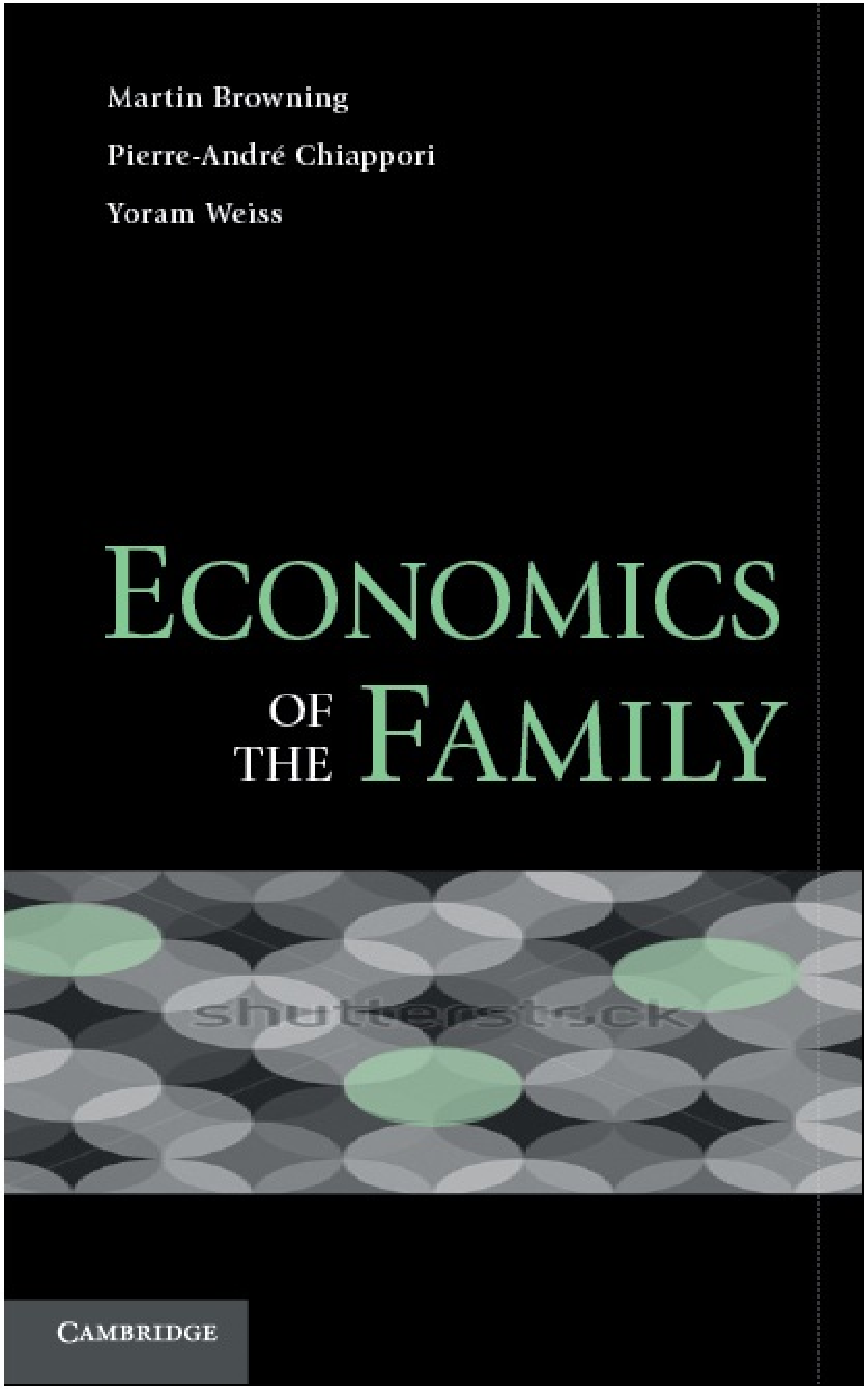
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ECONOMICS
OF THE FAMILY
CAMBRIDGE

Basic remarks

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This presentation:

Brief survey of recent works on the topic

Roadmap

1. **Families as risk-sharing institutions**
   - **Family response to exogenous shocks**
   - **Risk and family formation**
   - **Family as a source of risk**

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Families as risk-sharing institutions

A. **Family response to exogenous shocks**

B. **Risk and family formation**

C. **Family as a source of risk**

Families as risk-sharing institutions

A. Family response to exogenous shocks

B. Risk and family formation

C. Family as a source of risk

Families as risk-sharing institutions

A. Family response to exogenous shocks

1. **Which shocks?**
   - Income (wage, employment,…), productivity
   - Health (cost, productivity)
   - Wealth
   - Other
2. **Which responses? :**
   - (Dis-)saving
   - Labor supply
   - Transfers
   - Consumption
3. **Basic question: Is risk shared efficiently?**

Efficient risk-sharing:
Where do we stand?

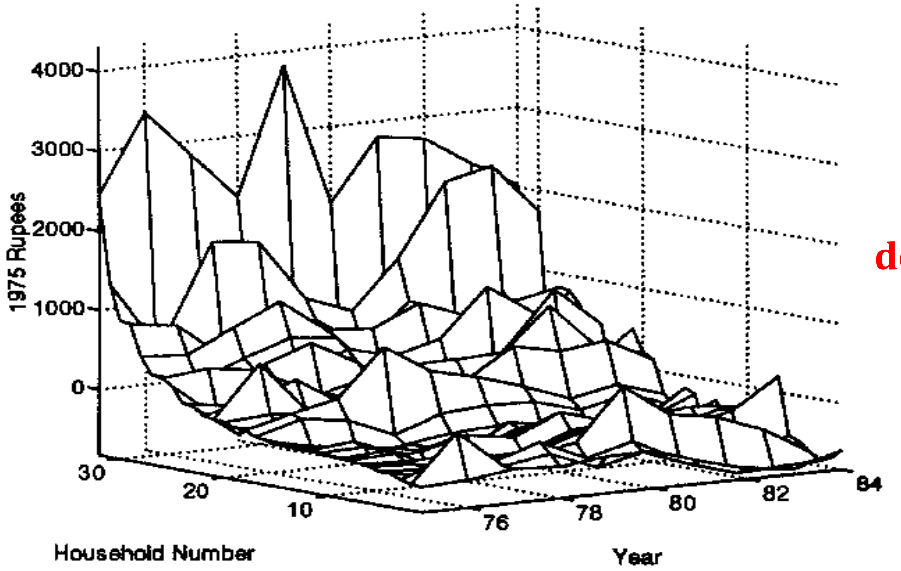
Mutuality principle: if risk is shared efficiently,

'The consumption of a given agent depends on aggregate shocks affecting the group, but ***not*** *on idiosyncratic shocks affecting the agent'*

Application: risk sharing in rural villages

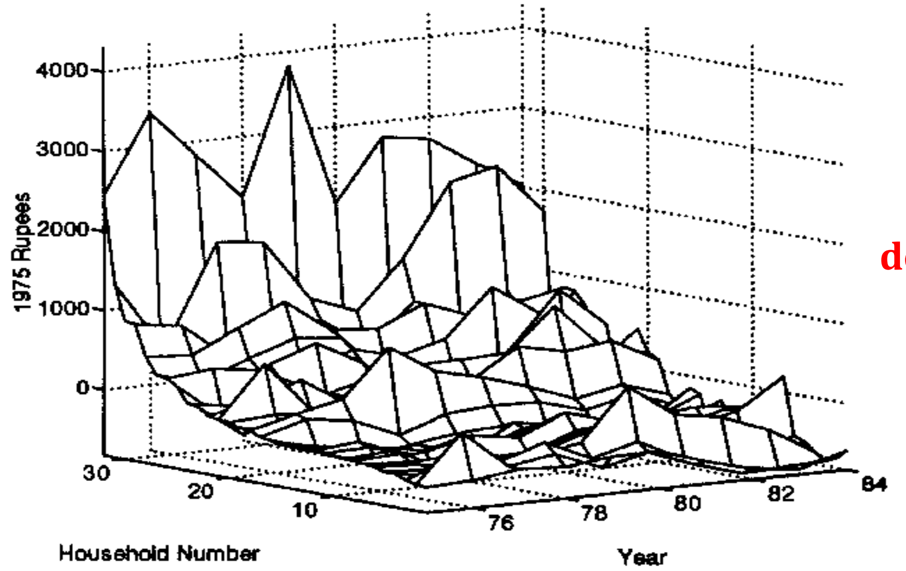
'The consumption of a given household depends on aggregate shocks affecting the village, but not on idiosyncratic shocks affecting the household'

Source: R. Townsend, 'Risk and Insurance in Village India, Econometrica, 1994



Incomes: deviation from the mean

Source: R. Townsend, 'Risk and Insurance in Village India, Econometrica, 1994



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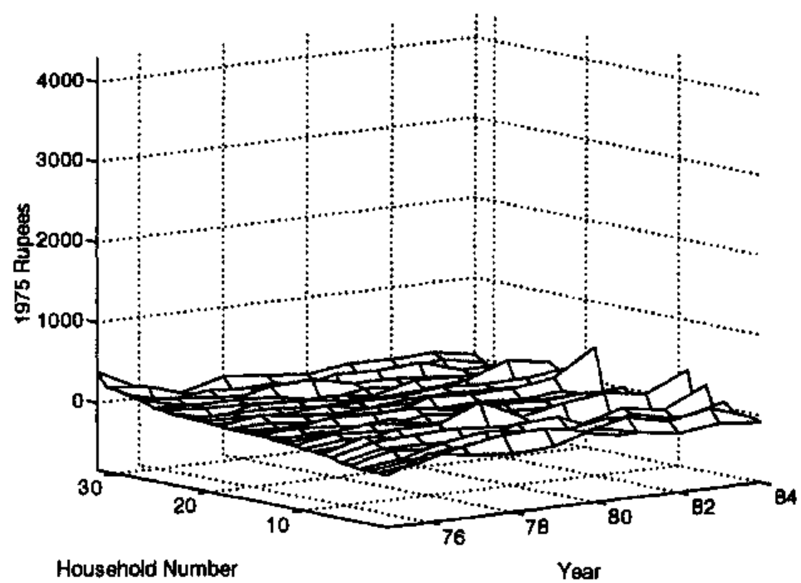

Consumptions: deviation from the mean

Efficient risk-sharing:
How do we test?

Basic insight: use the mutuality principle

- Regress individual consumption growth on aggregate and idiosyncratic income shocks
- Check that the latter do not matter

Problems

- Consumption, but also labor supply
- Long versus short panels
- Heterogeneous risk aversion?

Efficient risk-sharing: Conclusions?

Many studies

Cochrane 1991, Townsend 1994, Dercon & Krishnan 2000, Duflo & Udry 2004, CSST 2012, BCTY 2014, etc.

Conclusions

1. **Model matters!**

- Best formulation: CRRA with (very) heterogeneous RA …
- … but requires long panels …
- LS is important too (non separability)

Efficient risk-sharing:
Conclusions?

Many studies

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Conclusions

1. **Model matters!**
- Best formulation: CRRA with (very) heterogeneous RA …
- … but requires long panels …
- LS is important too (non separability)

2. **Quite a lot of risk sharing, although perfect RS sometimes rejected (but not always)**

Families as risk-sharing institutions

A. Family response to exogenous shocks

B. Risk and family formation

C. Family as a source of risk

Risk and family formation

Previous studies take families as exogenous; however:

- Family size and composition may be endogenous (e.g. crisis)
- Endogenous matching: who marries whom?

Various aspects:

- Matching on RA: who marries whom?
- Matching on risk: who marries whom?
- Equilibrium aspects
- Investment in Human Capital

Risk and family formation: findings

- **Matching on RA: who marries whom?**
  - Chiappori & Reny 2004, Legros & Newman 2004:

    Negative AM
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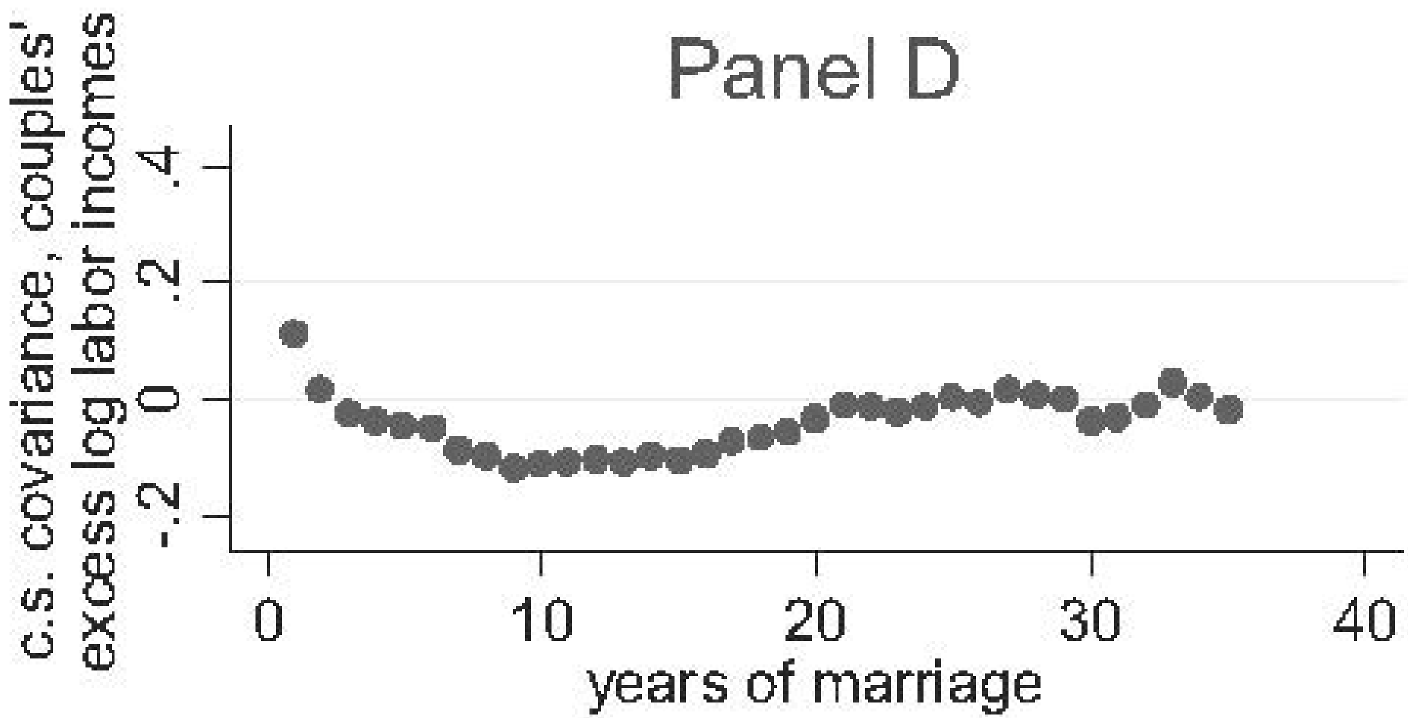
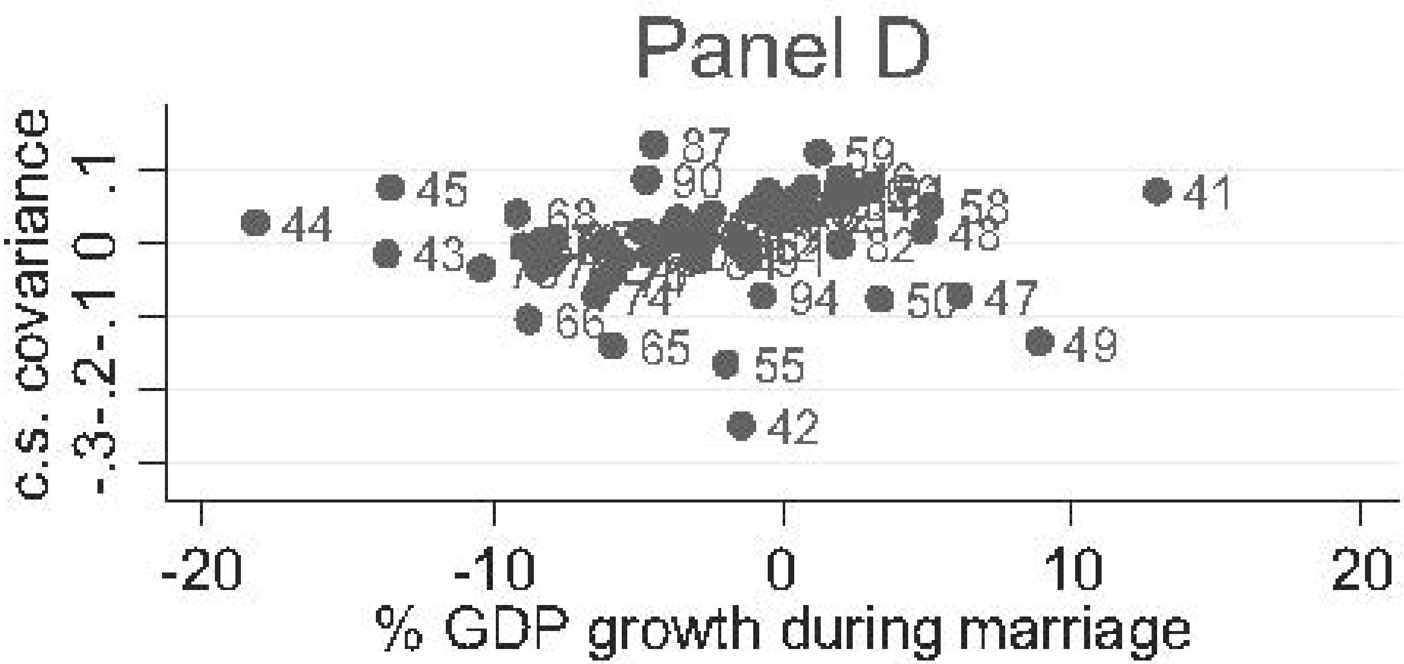
  - Less correlated risks, and different volatilities …
  - … which can vary (Shore 2010)



Source: Shore, S., “For better, for worse: intrahousehold risk-sharing over the business cycle”, *REStat*, 2010



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Risk and family formation: findings

- **Matching on RA: who marries whom?**
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    Negative AM
  - Intuition; implications for heterogeneity
- **Matching on risk: who marries whom?**
  - Qualifies the previous conclusion (Wang 2012)
  - Less correlated risks, and different volatilities …
  - … which can vary (Shore 2010)
- **Equilibrium aspects**
  - Model the 'Market for Marriage' …
  - … including HC investments (which also affect the risk)

Risk and family formation: a model

Chiappori, Costa Dias, Meghir (2013); dynamics:

- Agents invest in HC
- Agents match on the MM
- Income shocks realize; agents adjust their LS and consumptions

Resolution: backward

- For given RS agreement, optimal adjustments
- Then expected utility ex ante (depending on the RS)
- Matching equilibrium
- Investment in HC – partly motivated by the MM returns

Questions

- Assortative matching?
- Links between risk, insurance and investments?

Families as risk-sharing institutions

A. **Family response to exogenous shocks**

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Family as a source of risk

Basic idea: family dissolution (divorce)

- Distinction between marriage and cohabitation
  - ➔ main difference: ***commitment***
- But: agents cannot commit not to divorce
  - ➔ divorce as a limit to risk sharing
- Risk of divorce: various aspects
  - Impact on savings
  - Impact on LS and specialization
  - Impact on investments in HC (children, etc.)
- Role of prenuptial contracts (CW 2010; Voena 2013)
- Background questions:
  - 'General equilibrium' effects (CW 2007)
  - How about remarriage?

Family as a source of risk

Other family-related risks

- **Demographic risk: unwanted pregnancy**
  - Role of pill, abortion
  - Impact on investment (Goldin & Katz 2002)
  - `Empowerment' (CO 2008)

- **Demographic risk: offsprings**
  - Children as a savings asset
  - Dynastic issues: the case of China
  - Impact on economic behavior

    ➔ Wei & Zhang(2009): parents of boys save more when serious gender imbalances

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Family, risk, and socio-economic environment

Coping with risk: various mechanisms

- Family
- Private Insurance
- Social programs

➔ **Various questions:**

- Complements or substitutes?
- Is there 'crowding out'?
- Obvious example: pensions
- What is the impact of insurance programs on informal risk sharing mechanisms?
- What is the impact on the role of the family?

Crowding out?

Large literature; for instance Unemployment Insurance

- Savings: Engen & Gruber 2001

"... reducing the UI benefit replacement rate by 50 percent would increase gross financial asset holdings by 14 percent for the average worker."

- Labor supply: Cullen & Gruber 2000

"... our estimates imply that for each dollar of UI receipt wives earn up to 73 cents less."

Insurance and informal risk sharing

Literature on risk sharing: contracts, commitment and punishment

- Ligon, Thomas & Worrall (2002): commitment achieved by threat of exclusion
- Formal (micro) insurance schemes have two conflicting effects (Attanasio Rios Rull 2000):
  - Directly provide coverage
  - Increase welfare in autarky, therefore reduce punishment
- Which effect dominates is not clear

➔ micro insurance may ultimately reduce coverage!

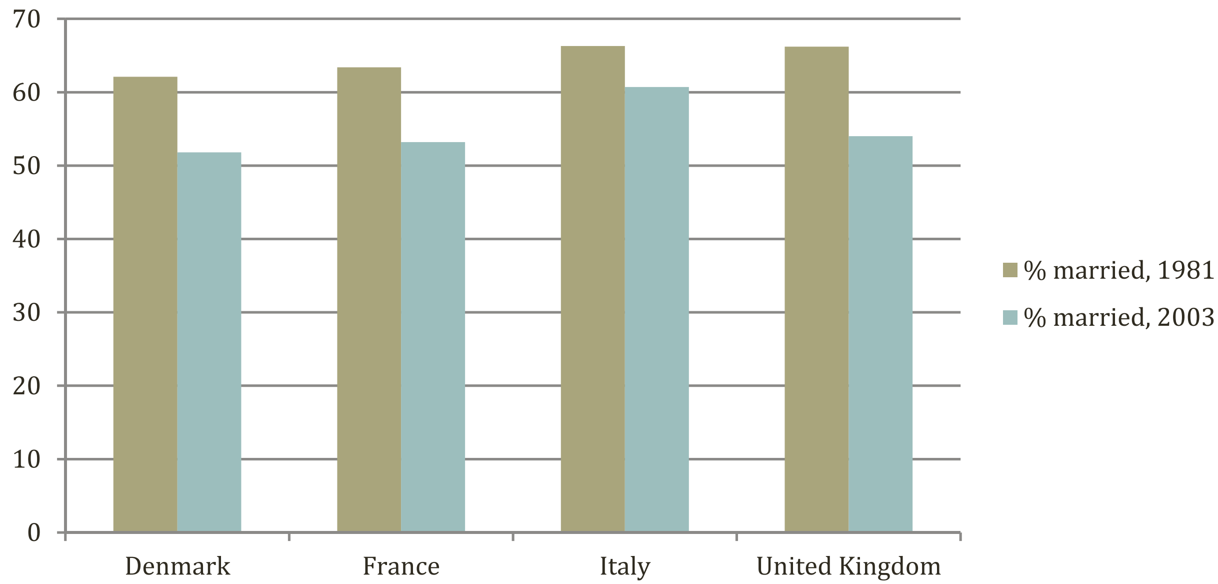
- Interesting research agenda: **can we test (and how)?**

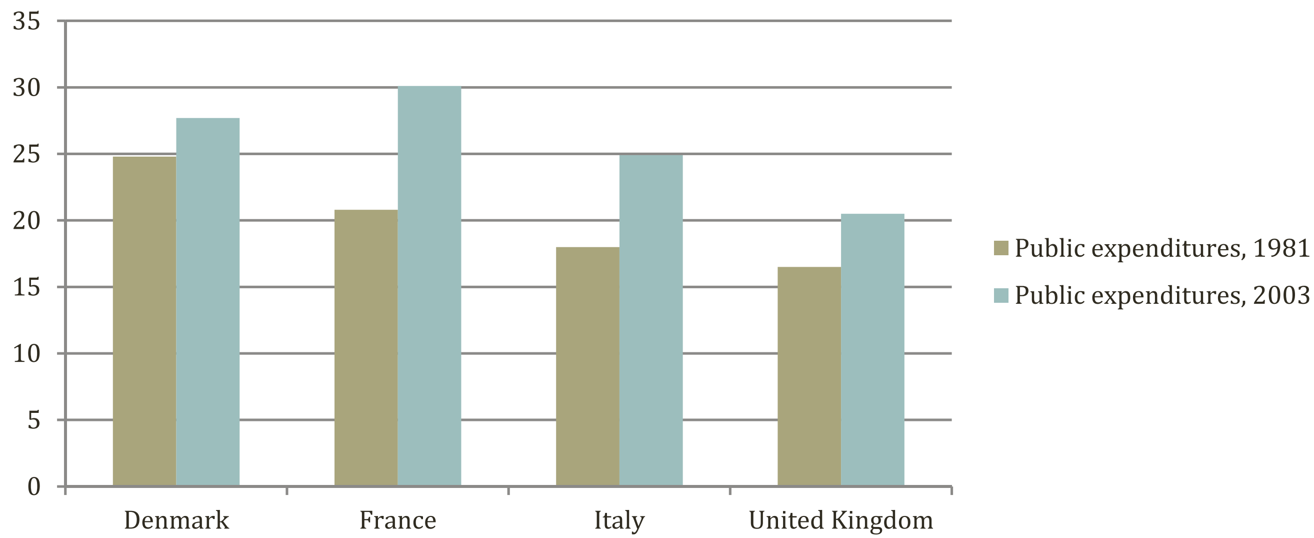
Social insurance and the family

- General notion: the (economic) role of the family is neither uniform nor constant; it depends on the socio-economic context

- Therefore, question:

  Does the development of social insurance mechanism reduce the role of families?


70
60
50
40
30
20
10
0
Denmark
France
Italy
United Kingdom
% married, 1981
% married, 2003


35
30
25
20
15
10
5
0
Denmark
France
Italy
United Kingdom
Public expenditures, 1981
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Family and the demand for insurance

- **Needs for insurance are related to age and family composition**

  ➔ segmentation, …

- **Gender roles in demand for insurance?**

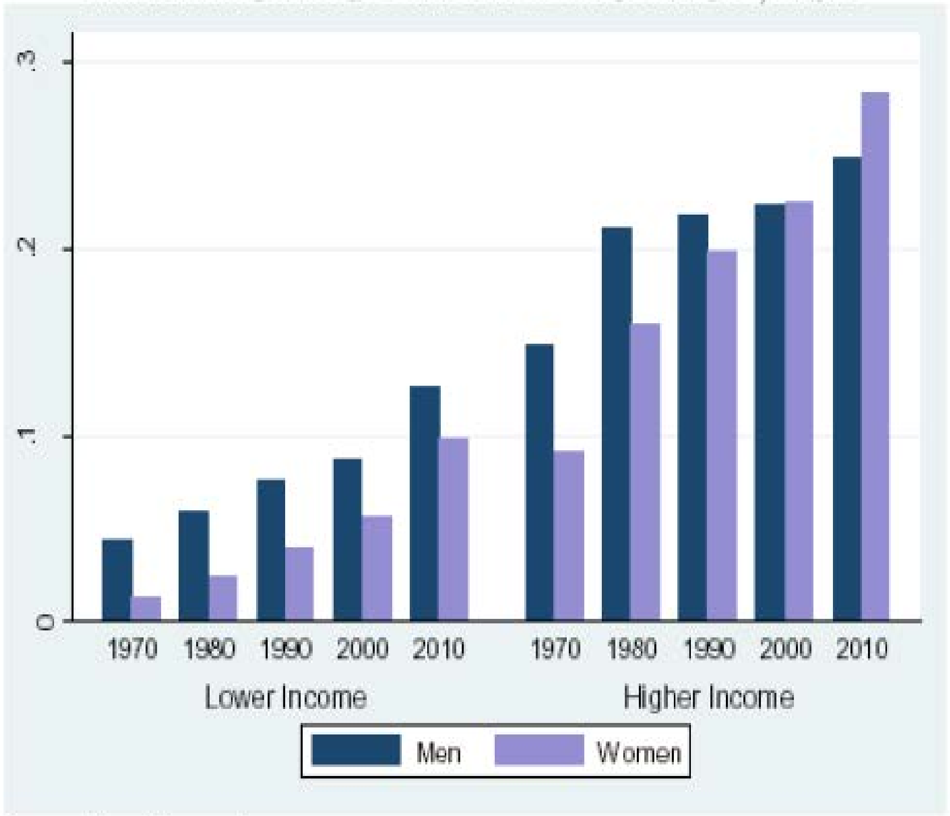
  ➔ women tend to be:

  - More risk averse
  - More patient (longer horizon)
  - More investment prone (especially HC)

Gender and the demand for insurance

- **Background question: does ‘power’ matter for (household) behavior?**
  - Standard response (‘unitary’ model): **NO**
  - Current response (‘collective’ model, large empirical literature): **YES!**
- **Is power shifting?**
  - Major changes over the last decades
  - **Consequences?**

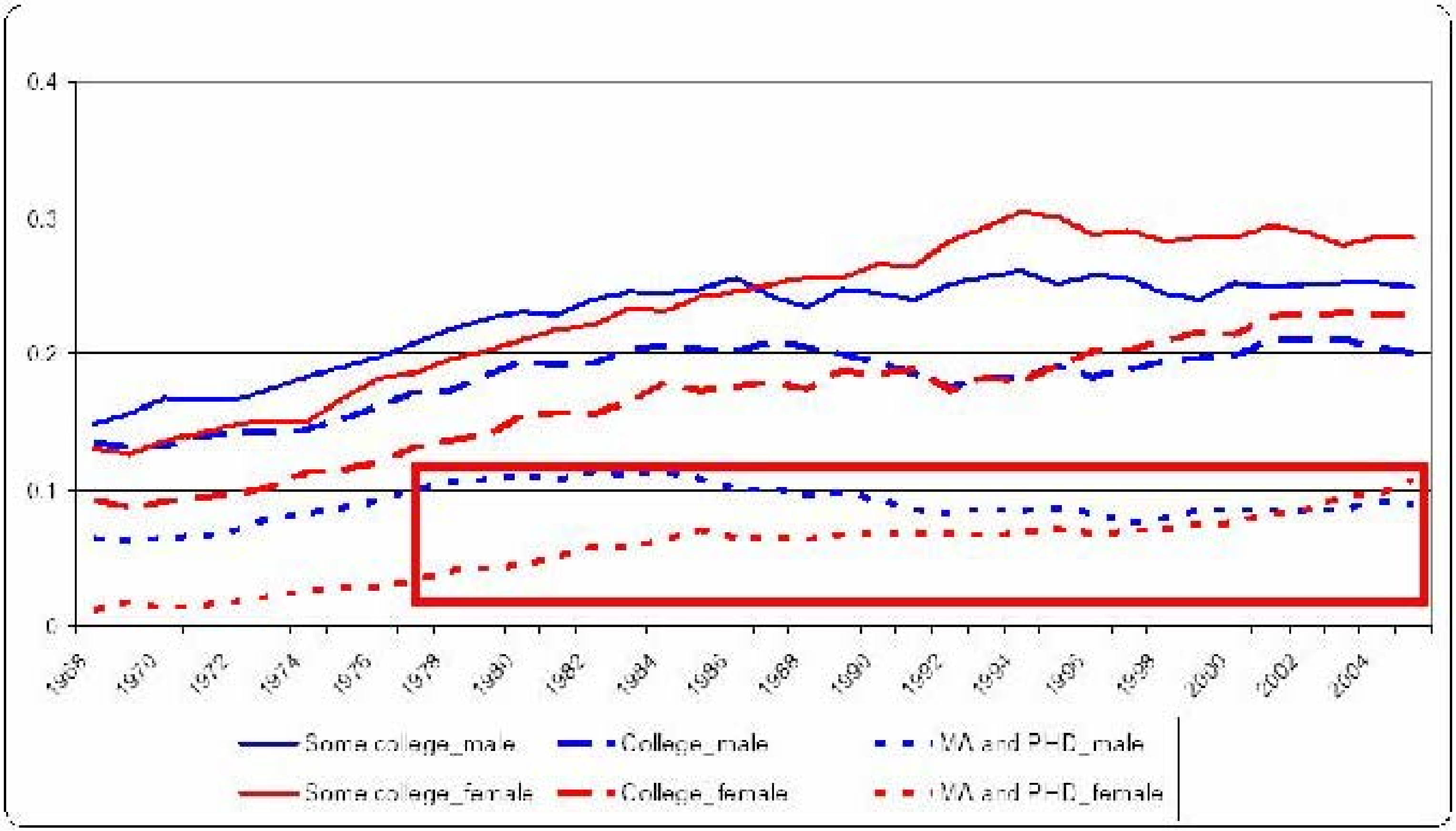
Figure 3: Fraction of 30- to 34-Year-Olds with College Education, Countries Above Median Per Capita GDP and Below Per Capita GDP, by Sex



Source: See Figure 1.

Source: Becker-Hubbard-Murphy 2009

Figure 13: Completed Education by Sex, Age 30-40, US 1968-2005



Source: Current Population Surveys.

Gender and the demand for insurance

- **Remarkable increase in female education, labor supply, incomes worldwide during the last decades.**
- **Consequences:**
  - Decline of the ‘traditional model’ (male as breadwinner)
  - Change is respective say on financial decisions
- **Impact on insurance?**
  - Still to be studied
  - One example

Gender and the demand for insurance

Thornqvist & Vardardottir 2013

- **'Powers' affected by labor demand shocks**
- **Impact on portfolio composition?**
- **Findings:** As women's power increases:
    - Participation in risky asset markets decreases
    - share of risky investments decreases
    - idiosyncratic risk decreases.
    - Women are more aware of the household's limited investment skills
    - reduce the economic cost from underdiversication.

Conclusion

- Very 'hot' topic

  ➔ CEAR (Georgia State)
- Much remains to be done (and understood)
- Therefore:

Conclusion

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Long life to Cintia!!