

Insurance and Credit: Micro Financial Underpinnings for Entire Economies by Robert Townsend A Discussion

Orazio P. Attanasio
University College, London and
Institute for Fiscal Studies
o.attanasio@ucl.ac.uk

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2 Risk Sharing

- Tests of perfect risk sharing
- Findings on insurance
- The Townsend research agenda: GE and full characterisation
- What imperfections?

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Introduction

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 - Micro-founded;
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- Rigorous theoretical models brought to data.
- Ambition to use this framework for positive and normative purposes.

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- Interestingly this contrasts with the approach taken in some of the early papers by Townsend.
- Both approaches have advantages and disadvantages.
 - robustness v ability to use results for policy.

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- This is great as such information is very hard to get .
- ... however we need a number of other assumptions/ data requirements.

The Townsend perfect insurance test

- The logic is very simple and intuitive.

" ...it was never easy....on Gaze Island, but they had the cows and a bit of hay, and the berries, the fish and the potato patches, and they'd get their flour and bacon in the fall from the merchant over at Killick- Claw, and if it was hard times, they shared, they helped their neighbor. No they didn't have any money, the sea was dangerous and men were lost, but it was a satisfying life in a way people today do not understand. There was a joinery of lives all worked together, smooth in places, or lumpy, but joined." (A. Proulx, *Shipping News* pp. 168-9).

The Wilson/ Townsend characterisation of perfect insurance

- First order conditions from a planner problem:

$$\lambda^i U'(c_t^i(s^t))\beta^t = \mu_t(s^t), \quad \forall i, s^t$$

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$$\Delta \text{Var}_g[\log(U'(c_t^i(s^t)))] = \alpha \Delta \text{Var}_g[\log(y_t^i(s^t))] \quad \forall g, s^t$$

α should be zero.

What is needed

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 - Extended families within villages?
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- Risk sharing group.
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- Preference specification:
 - Functional form;
 - Homogeneous preferences? (Mazzocco and Saini)
- What shock to consider (and what arguments to preferences)
 - Vera-Hernandez et al. (2012)
 - Health shocks, consumption and nutritional status

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- What type of imperfections are relevant?
 - Imperfect information
 - Imperfect enforceability of contracts.
- How to characterise constrained efficient allocations?

The research agenda: GE and full characterisation

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 - Households detailed accounts.

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- This is very ambitious, especially when one deviates from first best allocations and complete markets.
- The data requirements are tremendous:
 - This motivates Townsend's data efforts.
 - Households as firms
 - Households detailed accounts.
- Whether a full characterisation is feasible is still unclear.

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- For this purpose a strategy replicating the original Townsend approach (which relies only on the properties of allocations) might be useful.
- Examples:
 - Asymmetric information (Attanasio and Pavoni, 2011)
 - Imperfect enforceability (Attanasio, 2012)

Risk sharing with moral hazard and hidden assets

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- The model predicts a violation of the 'simple' budget constraint.
 - Hansen, Roberds and Sargent (1991) test of inter temporal budget constraint.
- Use (among others) the equation:

$$\Delta Var_g[\log(U'(c_t^i(s_t)))] = \alpha \Delta Var_g \log(y_t^i)$$

α can be related to the severity of the moral hazard problem.

Imperfect enforceability of contracts

- Ligon Thomas and Worrall (2002), Alvarez and Jerman (2002), Kocherlakota (1996), Dubois, Julien, Magnac (2008) , Rosenzweig and Foster (1998).

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- Ligon Thomas and Worrall (2002), Alvarez and Jerman (2002), Kocherlakota (1996), Dubois, Julien, Magnac (2008) , Rosenzweig and Foster (1998).
- Attanasio (2012) relates the amount of risk sharing observed in different villages properties of the income process in those villages.
 - Income processes estimated through subjective probabilities.
 - Amount of risk sharing measured by evolution of the cross sectional distribution of consumption.

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- Other markets imperfections (Udry, 2012)
 - Land markets
 - Labour markets
- What about implications of the impacts of specific interventions?

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- Outcomes will then depend:
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- Examples:
 - Rates of return on education
 - Rates of return on different types of productive investment
 - Knowledge of human capital accumulation technology

Measurements

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- Examples:
 - Subjective expectations on returns to education (Mexico)
 - Subjective expectations on returns to investment (Anantapur, India).
 - Asymmetric information in micro finance groups (Mongolia, Anantapur, India)
 - Information on knowledge (Colombia)

Conclusions

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- GE approach
- Linked to measurement and data.

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- GE approach
- Linked to measurement and data.
- Might be complemented by 'partial equilibrium' studies
- identification of components of the model.

Future agenda

- Modeling explicitly imperfections

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- Measurement.