Households in EURACE

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Outline

- general approach for households modelling
- households life in EURACE

Definition

- a group of people, often a family, who live together (*Cambridge dictionary*)
- A household includes all the persons who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters,... the occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements (*US Census Bureau*)
- Most economic theories assume there is only one income stream to a household; this a useful simplification for modeling, but does not necessarily reflect reality. Many households now include multiple income-earning members

Households in EURACE

- The household in EURACE is represented by an agent that takes all the economic decisions and carries out all the economic activities
- Households work, spend, buy and sell assets, deposit and withdraw money...
- We don't have any further differentiation internal to an household
- An household is identified with a single human being

Households decision making

- information
  - households take decisions based on the information they own
  - households have different degrees of information
  - households ask information to other agents
  - when households receive messages from other agents, they use it or they store it in their memory
- interaction
  - interaction among agents is often essential in the decision making process
  - households interact with every agent typology

Households decision making II

- bounded rationality
- adaptive behaviors
- beliefs based on the past
- decision based on rules of thumb

Buffer-stock theory of saving

- Consumers have a target level for a buffer-stock of liquid assets that they use to smooth consumption in the face of an uncertain income stream.
- If their buffer stock falls below its target, they will consume less than their expected income and liquid assets will rise
- If they have assets in excess of their target they will spend freely and assets will fall
- Despite its heuristic simplicity, the exact mathematical specification of optimal behavior is given by a thoroughly nonlinear consumption rule for which there is no analytical formula (Carroll, 2001; Allen, 2001)

Consumption rule in EURACE

- each household has a wealth to income target ratio $WtoIr_T$
- and an actual one given by $WIr = \frac{W}{Mean_I}$
- Consumption budget is therefore given by

$$C = Mean_I + \alpha_C \left(W - WtoIr_T * Mean_I \right)$$

- Households can't cut their budget more than 50%