Consumption Smoothing and Borrowing Constraints: Evidence from Household Surveys of Iran

Discussant: Hamed Ghoddusi
School of Business, Stevens Institute of Technology
IIEA, June 2016

Summary of Paper

- Introducing modern macro-financial models to the study of the Iranian economy
- Stochastic Euler equation estimation for public/private sector employes (as well self-employed and unemployed)
- Policy relevance
  - Optimal intervention for demand stimulation
    - Agents' consumption response to policy-induced changes in income
  - Estimation of the welfare costs of financial underdevelopment
  - Implicit value of public sector employment contracts

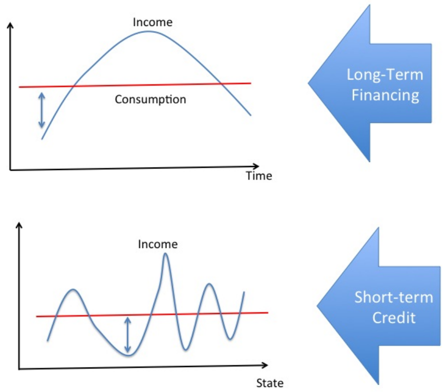
Summary of the Paper: Consumption, Income, and Wealth

- Keynes: consumption is a fixed proportion of disposable income
- Permanent income hypothesis (PIH): people's consumption is a function of their life-time income and not today's income
  - Precautionary saving
- Consumer problem $V = \max_c \mathbb{E}_t \sum_t^\infty u(c_t)e^{-\beta t}dt$
  - s.t. $W_{t+1} = (1+r)(W_t + y_t - c_t)$
- Optimality conditions:
  - $u^{'}(c) = V^{'}(W)$
  - Euler equation: $u^{'}(c_t) = \beta \mathbb{E}_t[u^{'}(c_{t+1})(1+r)]$

Summary of the Paper: Rational Expectations and Consumption

- Euler equation: $u^{'}(c_t) = \beta(1+r)[u^{'}(c_{t+1}) + \epsilon_{t+1}]$
- $\epsilon_{t+1} = \frac{1}{\beta(1+r)}u^{'}(c_t) - c_{t+1}$
- Rational expectations requires that ϵ_{t+1} be unpredictable given the information set at time t
- Empirical studies show that ϵ_{t+1} is indeed predictable using variables such as income!

Consumption Smoothing: Over Time and State



Comment 1: Theoretical and Conceptual Aspects

- Access to finance in Iran is mainly in the form of long-term credit: housing, auto, and durable goods loans
  - Highly under-developed short-term credit market
  - Formal and informal lending institutions
- Precautionary saving motives:
  - $\Delta c = \underbrace{\eta}_{\text{EIS}} (1+r)\beta + \underbrace{\lambda}_{\text{Coefficient of Relative Prudence}} \underbrace{\mathbb{E}[(\Delta c)^2]}_{\text{Volatility}}$

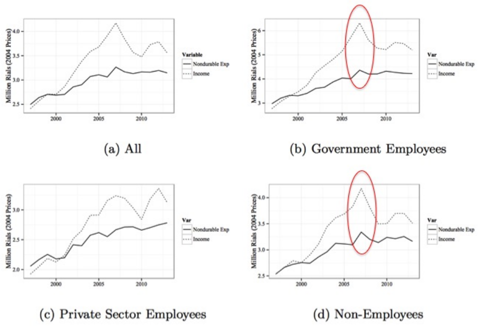
Comment 2: Response of Consumption to Income Shocks

- Should consumption be more or less volatile than income?
- Naive interpretation of PIH: current income shocks shouldn't matter for consumption
- Angus Deaton: depends on the persistence of shocks
  - i.i.d: current income has no effect on the permanent income
  - Mean-reverting: shocked are partially relevant for the permanent income
  - Random walk: shocks are permanent
  - Long-run risks: shocks to the drift of the income process

Comment 3: Empirical Setup

- Time-series properties of the income process
  - Persistence of income shocks across different groups
  - Effect of high discount rates in Iran: lowering the effective horizon and making current income shocks more relevant for the present value of income
- Econometrics:
  - Government employes: a much stable income profile
    - Identification power
    - Lower motives for precautionary saving
  - Lower R^2 of the Euler equation for public-sector employees

Durable Consumption and Income



(a) All

(b) Government Employees

(c) Private Sector Employees

(d) Non-Employees

Comment 4: Additional Estimations

- Test the predictive power of forward-looking variables (i.e. the stock market index, industrial production, house prices, ...)
- Estimate the welfare loss associated with borrowing constraints
- Inter-temporal Elasticity of Substitution (EIS)
  - Connection to the previous sections of the paper
  - Reciprocal of risk-aversion?
  - Policy implications
  - Check with consistency with stylized macro and asset pricing observations
- Separate the failure of "rational expectations" from "borrowing constraints"

Comment 5: Micro Evidence

- Test the response of consumption to positive transitory shocks to the borrowing capacity
- An ambitious step for future

Concluding Comments

- Important paper, having the potential to generate a stream of follow-up research projects
- Sharp and relevant empirical result
- Possible benefits from additional developments:
  - Smoothing over time and state
  - Durable and non-durable consumption
  - Short-term and long-term credit
  - Time-series properties of income and consumption
  - Forward-looking income measures
  - Welfare loss estimation