Discussion of:

A first look at the links between aggregate household wealth and some macroeconomic variables

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Research question of the paper

- What's the **relationship** between a set of "variables that should influence wealth" and household net wealth and also financial and real assets separately (because effects could cancel out)?

Data and methodology

- Country level comparable data on 8 OECD countries for the 1980-2013 period (unbalanced panel)
- Regression model

$$y_{it} = x'_{it}\beta + \rho_1 \Delta y_{it-1} + \alpha_i + u_{it}$$

with Arellano-Bond estimator to take care of violation of strict exogeneity of lagged regressors in the presence of unobserved heterogeneity

Variables related with wealth

- GDP: the higher the income is, the higher the wealth is;
- Public debt to GDP: most gov. bonds are held domestically;
- Elderly ratio: the elderly hold most wealth, but decumulate;
- Unempl.: the unemployed decumulate assets + proxy for BC;
- Saving rate: the more hholds save, the higher the wealth is;
- Social expenditure: the larger the welfare, the lower the accumulation;
- Exchange rate: effect through investment in foreign assets;
- Interest rate: income + substitution effect;

Variables related with wealth

- Int'l trade: openness may increase wealth and foreign assets holdings;
- Self employm.: the self-employed tend to accumulate more because of lower pensions;
- Taxation which influences the incentives to wealth accumulation…
  - Tax revenues
  - Tax wedge, which should reduce labor, hence income and wealth;

Comment – Reverse causality issues

- GDP: income → wealth, but also:
  wealth → income (e.g. through investment)
- Saving rate: s → wealth, but also:
  wealth → s (e.g. through decreasing mpc)
- Interest rate: r → wealth, but also:
  wealth → r (e.g. through GE effect)
- Tax revenues: wealth → tax revenues

→Arellano-Bond **<u>may</u>** take care of reverse causality…

Arellano-Bond estimator (with once lagged dependent variable)

- Moment conditions

$$E[\Delta y_{it-\tau}\Delta u_{it}] = 0 \quad \tau \geq 2$$

$$E[\Delta y_{it-\tau}(\Delta y_{it} - \Delta \boldsymbol{x}'_{\boldsymbol{it}}\beta - \rho_1 \Delta y_{it-1}] = 0$$

If: $\boldsymbol{x_{it}} = a_1 y_{it} + a_2 y_{it-1} + \cdots$

the moment conditions may be violated.

Even if the Arellano-Bond estimator takes care of endogeneity due to reverse causality (because it all depends on the choice of the orthogonality conditions)…

how do we interpret the coefficients?

What do you mean by **relationship** or link?

- Simply a correlation?
- Causal relationship?

→ Granger causality tests are a standard tool to analyze causality linkages in applied econometrics.

→ Granger causality ≠ true causality

still… it tells you whether one variable may be useful for forecasting another and … this may be of some interest!

→ If both dep. and indep. var. are driven by a common third process with different lags, one might still fail to reject the alternative hp of Granger causality

Comments on estimation results

- Some variables are insignificant (e.g. GDP, Elderly ratio): maybe a non-linear relationship?
- For some variables, the evidence from the NFA and RA regressions is not hard to reconcile with that from the NW regression

  E.g. **Saving**: **+** coeff in NFA+ unexpectedly larger coeff in NW

  Soc. exp: **-** coeff in NFA + surprisingly large **+** coeff in NW

  Self empl.: + coeff in NFA + unexpectedly **-** coeff in NW

Comments on estimation results

- **Tax revenues**: positive coefficienton RA and on net wealth

  "Tax revenues are positively related with real wealth because a higher value of dwellings lead to higher tax receipts." (p. 14)

  Direction of causality?

Concluding remarks

- Very interesting exercise
- Suggestive evidence, but:
  - Need to better motivate the analysis
  - Why these variables and not others?
  - Give a sense of the economic size of the effects

THANK YOU