Discussion of "Working More to Pay the Mortgage: Interest Rates and Labor Supply"

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Main Question: How mortgage payments affect labor supply?

- Most of the existing literature focuses on the impact of mortgage payments on households' consumption.
- However, equally important is the impact of mortgage payments on labor supply.
- A framework by Auclert, Bardoczy and Rognile (2020) for a frictionless labor supply:

$$MPC \equiv \frac{\partial c_t}{\partial T_t}, MPE \equiv -\omega \frac{\partial n_t}{\partial T_t}$$

- the ratio of MPE over MPC is:

$$\frac{MPE}{MPC} = \frac{\omega n}{c} \frac{Frish}{EIS}(1 - CI)$$

where CI is a complementarity index. (for separable preferences $CI = 0$ and for GHH $CI = 1$).

Existing estimates of MPE and why we may need a separate MPE estimate

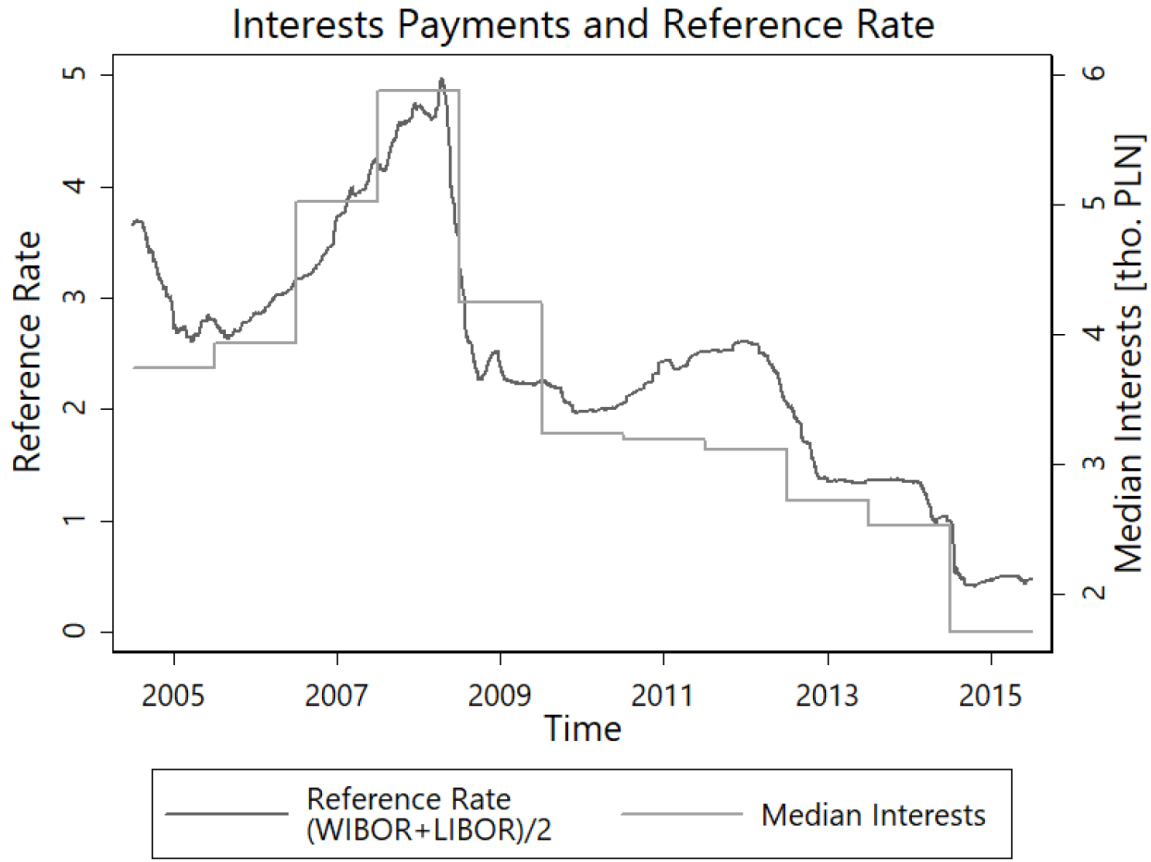
- Imbens et al. (2001): average MPE out of the yearly payment from a 20-year annuity: 0.048-0.122
  - If interest rates follow a random walk and homeowners labor supply response is the same as lottery winners this could be an upper bound on MPE out of interest payments.
- Cesarini et al. (2017): MPE of 1% out of a one time lottery payment.
- So do we need a new estimate of labor supply out of mortgage interest payments? and should we believe numbers significantly larger than Imbens et al (2001) or Cesarini et al.(2017)?
  - More prevalent than lottery shocks.
  - Consumption commitment (Chetty and Sziedl 2007) can affect labor supply significantly.

Institutional background and data

- Almost all mortgages are floating (interest adjust every 3 or 6 months).
- Large fraction (25-50%) of mortgages are denominated in foreign currencies.
- Data is based on tax filing of individuals.
- Covers 2005-2015.
- mortgage interest payment is tax deductible for mortgages originated between 2002-2006.

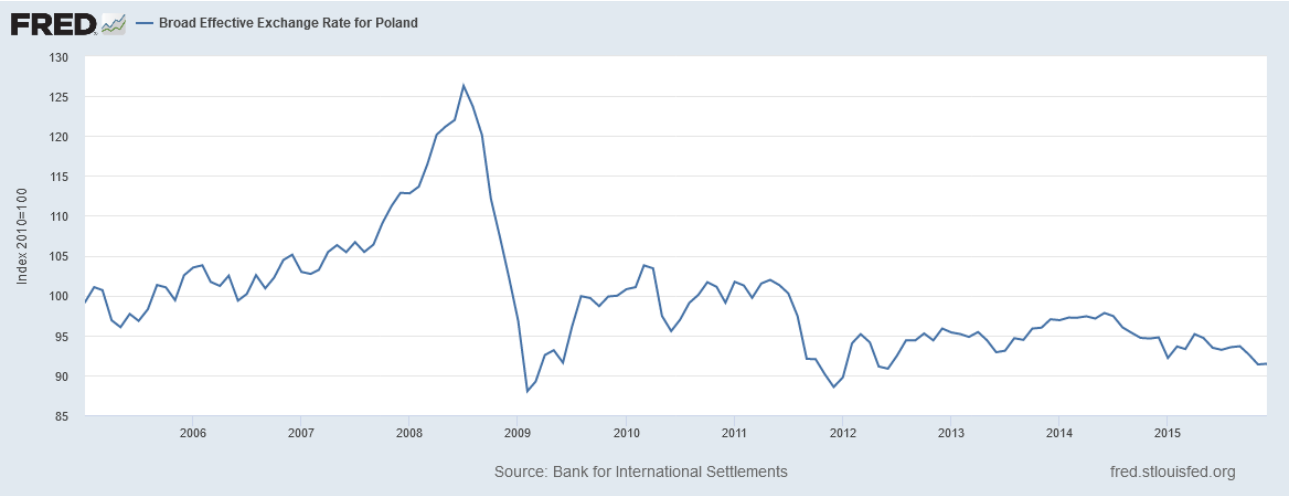
Comment I: importance of asymmetry

- In the data there are more reduction in interest rates than increases.
- Consumption commitment model implies larger labor supply response to increase in rates than reduction in rates.



Comment II: better to identify denomination of the mortgage

- The period of 2007-2009 is also associated with a significant change in the exchange rate.
- Would be better to use changes in interest payments across years to identify denomination of the mortgage.
- This can even help to use the variation within mortgage holders to identify labor supply response.



Comment III: Marginal tax rate, tax evasion and labor supply

- Increase in the interest expenses can change the marginal tax rate on income from 32% to 18%.
  - This on one hand increases the marginal incentive of the household to work.
  - It can also change the incentive of the worker to avoid taxes.
- Why not splitting the sample to those who experience a change in marginal tax rate and those who do not?

Comment IV: Slightly modified specification

- Perhaps what matters for households is mortgage payment relative to household income.
- In that case, it is better to normalize all variables with the income of the household in the base year:

$$\frac{Income_{it}}{Income_{i0}}, \frac{MortgagePayment_{it}}{Income_{i0}}$$

- This should also make the result based on the variation in mortgage size sharper.
  - and enables you to control for AgeGroupXIncomeGroupXYear fixed effects in the labor supply result as well.

Other comments: better controls and clustering

- Would be better to control for the interaction of being in the treatment group (i.e. having a tax deductible mortgage) or mortgage size and other macro variables.
  - At the end of the day the variation in interest rate is endogenous and differential exposure of mortgage holders to macro shocks can be a confounding factor.

- The main source of variation in the data are time series variations in the mortgage interest rates. So it is better to cluster standard errors at Year or Year X mortgage size bins (depending on the specification).