

Micro level data for macro models: the distributional effects of monetary policy.

Evidence from EU-SILC survey data

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Motivation

The aftermath of the global financial crises, **the impact of monetary easing on inequality** has recently attracted increasing attention.

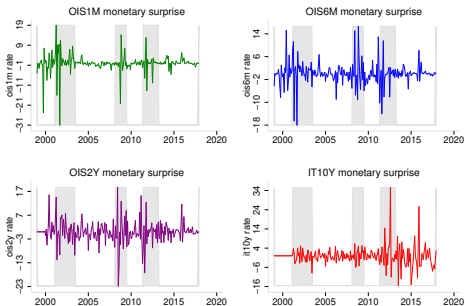
In the present study we investigate whether monetary policy, both conventional and unconventional, has affected income inequality in Italy **focusing on household disposable income, earnings, financial capital income and financial wealth**, and dealing with **the income composition channel and the financial channel**.

We use for the first time the **household survey microdata on Income and Living Conditions (EU-SILC, Istat)** in a repeated cross-section design in order to compute inequality measures over time and for specific incomes.

Microdata and inequality measures

- 1 We compute more widely used measures of inequality: the Gini coefficient of levels which takes **values between 0 (perfect equality) and 1 (perfect inequality)** and also the standard deviation of log level, p90/p10 and p75/p25 ratio
- 2 Additionally, to analyse the effects on the distribution, we compute the **99th, 90th, 75th, 50th, 25th, and 10th percentiles**
- 3 Finally, to get robust estimates over time we needed to a **back-calculation** of EU-SILC inequality income measures, since their time coverage is 2004-2017, exploiting the SHIW historical archives available on the Bank of Italy's website obtaining a longer time span **1999-2017 yearly data** useful for macro estimates.

ECB monthly surprises: Target, Timing, Forward Guidance, QE



To disentangle a pure monetary policy surprise from one that arises from central bank information, we use intraday interest rates changes around ECB policy announcements available in the **Euro Area Monetary Policy Event-Study Database (EA-MPD)**, compiled by C. Altavilla, et al. (2019). It makes available exogenous surprises as interest 1-month OIS (Target factor) and 10 years maturities changes (QE factor).

Empirical strategy

We examine **the impact of unconventional monetary policy** on inequality measures Z_i using a battery of **Local projections**, (Jordá 2005):

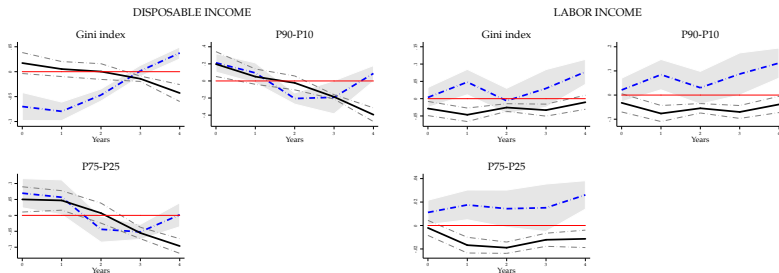
$$\Delta Z_{i,t+h} = \alpha_i^{(h)} + \sum_{j=1}^l \psi_j^{(h)} \hat{\epsilon}_{s,t-i}^{MP,y} + \beta_i^{(h)} \hat{\epsilon}_{s,t}^{MP,y} + \eta_{i,t+h} \quad (1)$$

First, we trace out the effect of an expansionary conventional monetary policy on inequality as a (counterfactual) baseline scenario 1999-2012 using the Target monetary surprise, then we compare it with a second scenario that account for the effect of an expansionary unconventional monetary policy on inequality (all sample 1999-2017) using the QE monetary surprise aggregated at annual level:

$$\hat{\epsilon}_{s,t}^{MP,y} = [OIS1M, IT10Y]$$

LP IRFs

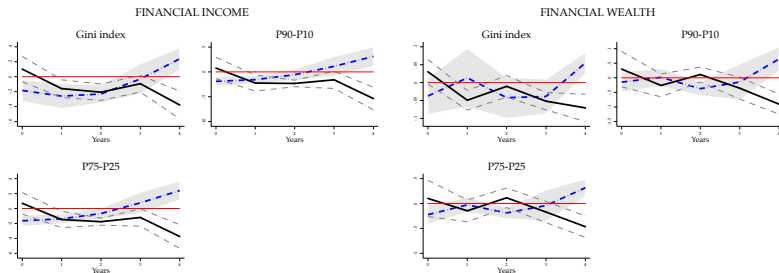
LP-IRFs: positive MP shock on Disposable Income and Earnings



- An expansionary monetary policy shock reduces disposable income inequality. With respect to the conventional scenario (blue dash-dotted line) the equalizing effect of non-standard policy is long-lived (black solid line).
- The dynamics of labor income inequality measures are persistently equalizing in the unconventional case favoring the bottom of the distribution.

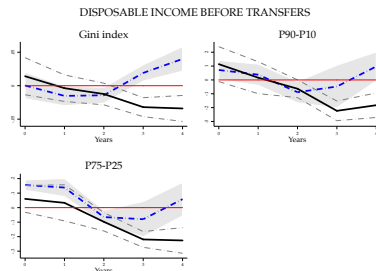
LP IRFs

LP-IRFs: positive MP shock on Capital Income and Financial Wealth



- In the unconventional scenario the Gini coefficient of capital income increases on impact and then decreases persistently from the second year onwards. This fall is mainly driven by the prompt rise in the bottom of the distribution.
- In the unconventional scenario the Gini coefficient of the financial wealth increases on impact and persistently decreases from the second year onwards.

The role of fiscal policy



- The effect of a MP shock on disposable income before transfers reduces inequality in Italy both in standard and non-standard case. Furthermore, the impulse responses of the P90-P10 and P75-P25 inequality measures exhibit a more marked decrease meaning that low-income households have benefited more from the effect of monetary policy other than fiscal transfers, if anything.

Main findings and further analysis

- The main results on the income distribution show that the income composition channel works in the right direction during the QE period by reducing inequality even if the overall impact on Italian household incomes is modest.
- Only in the long-run, the persistent decline of the Gini index for financial wealth reflects some gains at the bottom of the distribution, meaning that unconventional monetary policy is no longer "neutral" over the cycle.
- Some evidence to suggest that **QE is associated with a decrease in Italian households inequality.**

Some issues of interest

The key role of fiscal and redistributive policies on inequality and the extent to which the monetary-fiscal mix in Italy has been inadequate.