

A Comparative Case Study of Japan's Unconventional Monetary Policy 1999–2006

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September 2024

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Introduction

- Unconventional monetary policy tools are used persistently
- Unequal distribution of financial assets as one aspect of a revived inequality (Piketty, 2014)
- '[C]entral banks purchasing longer-dated assets disproportionately benefit wealthier households whose assets tend to have longer durations than their liabilities' (Schnabel, 2021)

Historical Context

- Japanese asset price bubble 1986–1990 (*baburu keiki*)
 - Plaza Accord 1985: Devaluation of the Dollar within the Group of Five
 - Expansionary fiscal and monetary policy (Okina et al., 2001)
 - The Nikkei 225 nearly doubled between 1986 and 1988
- 'Lost decade': Prolonged period of stagnation
- 1999: Bank of Japan lowered rates to 0.15% (zero interest rate policy)
- 2001: Implementation of quantitative easing

Transmission Channels

1. Earnings heterogeneity channel:
Different responses to monetary policy shocks along the distribution, e.g., due to distinct wage rigidities
2. Job creation channel:
Economic stimulation lifts the number of employed households
3. Income composition channel:
Higher yields from assets combining with sticky nominal wages disproportionately benefit those drawing on capital income

4. Portfolio channel:
Financial assets are boosted in comparison to more traditional sources of capital income
5. Savings redistribution channel:
Inflation might imply transfers from lenders to borrowers
(Coibion et al., 2012; Inui et al., 2017; Nakajima, 2015)

Synthetic Control Method

- Compares outcome evolution of affected unit to that of a weighted control group:

$$\hat{\beta}_t = y_{1t} - \sum_{i=2}^{J+1} w_j y_{jt} \quad (1)$$

- Weights are meant to construct a control closely reproducing the pre-treatment outcome by minimising the mean squared prediction error:

$$\frac{1}{T_0} \sum_{t=1}^{T_0} \left(y_{1t}^0 - \sum_{j=2}^{J+1} w_j y_{jt}^0 \right)^2 \quad (2)$$

Results

Figure: Income Inequality in Japan and the Synthetic Control Based on Matching Predictors for the Years 1980–1998

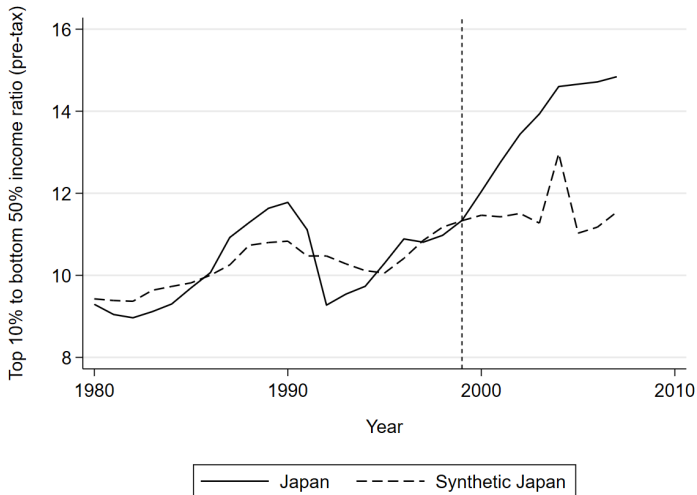


Figure: Income Inequality Gap in Japan, Monetary Base and Uncollateralised Overnight Call Rate

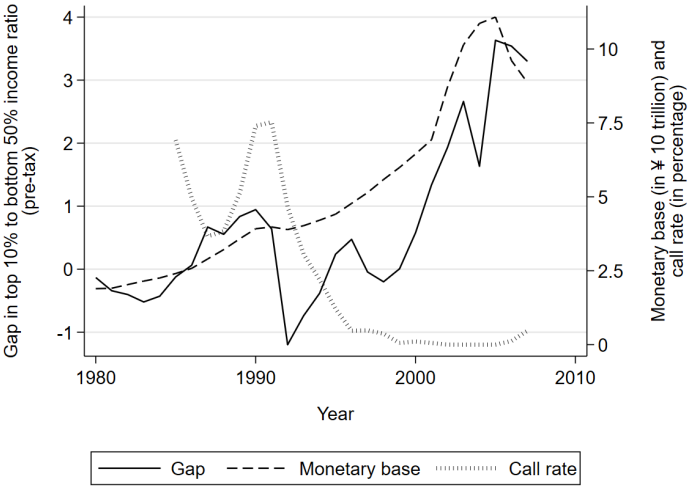


Figure: Robustness and Sensitivity Checks for the Estimation of the Income Inequality Gap in Japan

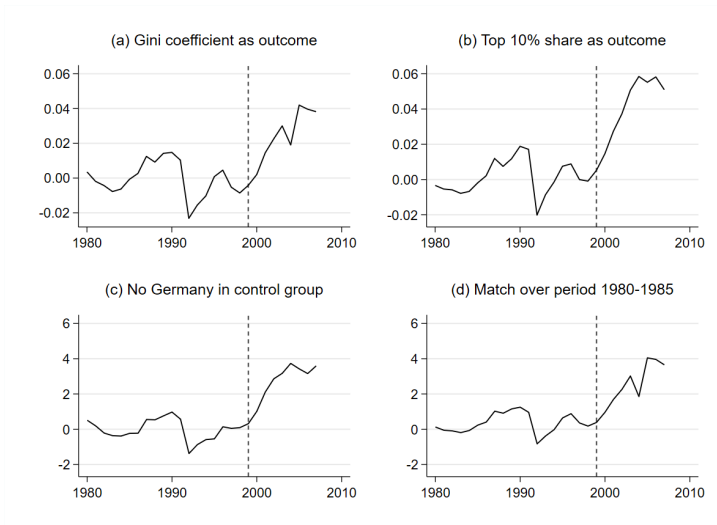


Figure: Income Inequality in Germany and the Synthetic Control Based on Matching Predictors for the Years 1980–1998 (Placebo Test)

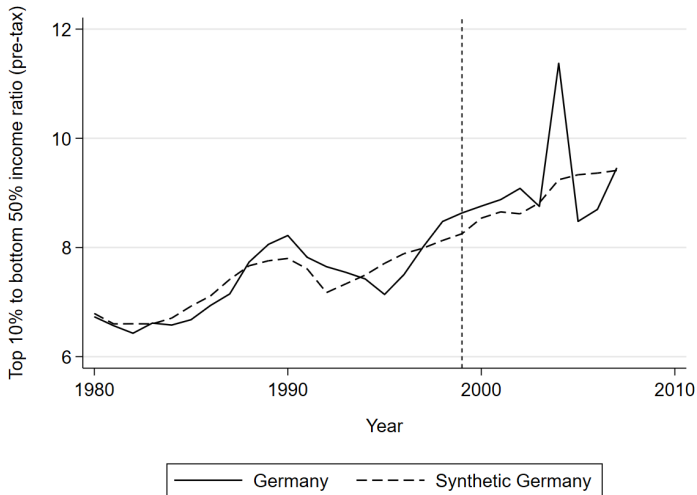


Figure: Year-on-year Growth Rates for Capital and Labour Income in Japan



Discussion

- Almost a 29% increase of the P10/50 income ratio
- Gini coefficient: 7%; top 10% income share: 12.5%
- In line with plentiful model-based studies (Feldkircher & Kakamu, 2022; Israel & Latsos, 2020; Leo, 2022; Saiki & Frost, 2014, 2020; Taghizadeh-Hesary et al., 2020; Yoshino et al., 2018; Yuksel, 2021)
- Effect seemingly ran mainly via the income composition channel
- Silent about changes within the distribution of labour income
- Country-specific characteristics: labour market rigidity and a large share of the population older than 65 years or retired (Saiki & Frost, 2020)

Literature I

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Additional Slides

Table: Income Inequality Predictor Balance

Variables	Japan	Synthetic
P10/P50 income ratio	10.27	10.03
GDP per capita	24,630.06	18,256.70
Trade-to-GDP	20.21	37.85
FDI inflows (% of GDP)	0.02	0.41
Private credit (% of GDP)	155.52	90.05
Banking crisis	0.11	0.03
Government spending (% of GDP)	14.28	17.94
Population	123,000,000	116,000,000
Employment-to-population	61.75	54.93

Figure: Estimated Income Inequality Gap for Each Unit of the Donor Pool Based on Matching Predictors for the Years 1980–1998 (Placebo Tests)

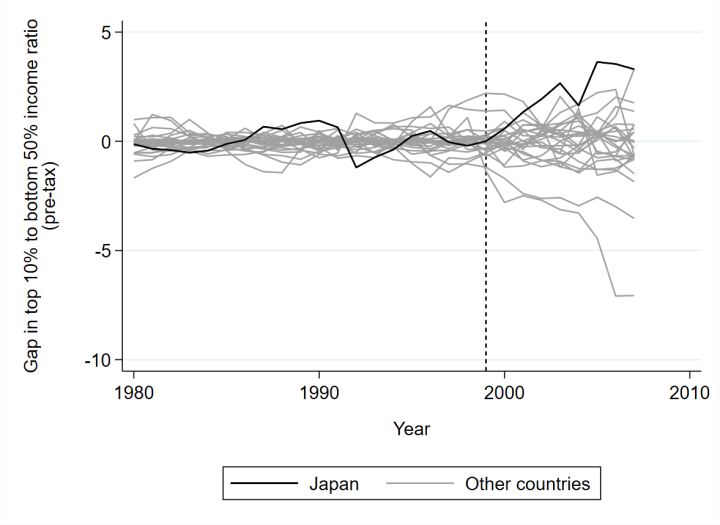


Figure: Income Inequality in Hungary and the Synthetic Control Based on Matching Predictors for the Years 1980–1998 (Placebo Test)

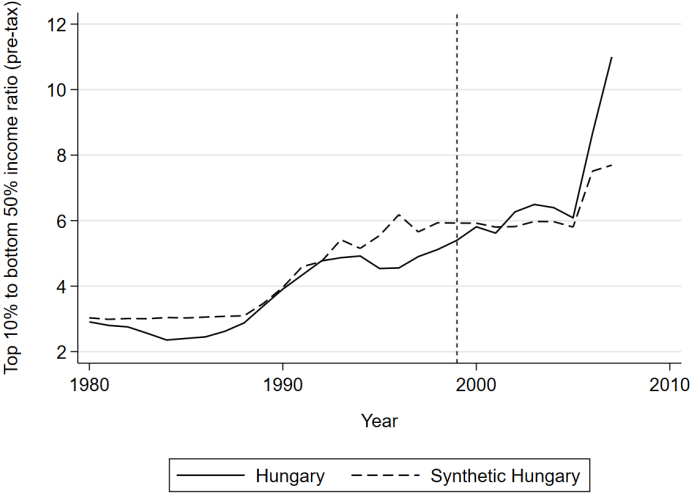


Figure: Yearly Inflation Rate in Japan

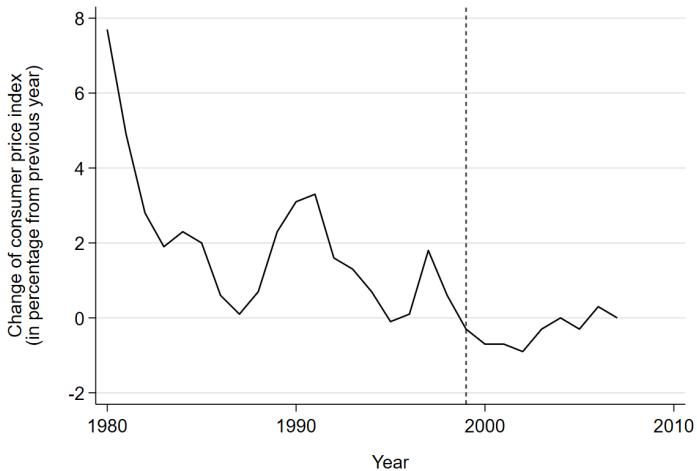


Figure: Financial Assets per Household by Yearly Income Decile Group in Japan for the Year 1999

