Internet Appendix for "Monetary Policy and Inequality"

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In this appendix, we present additional results and provide details about the institutional setting and about certain parts of the data analysis. The structure of the appendix is as follows. Section I presents additional results. Section II describes how we measure property values. Section III describes how monetary policy is decided in Denmark. Section IV presents details about the construction of alternative monetary policy shocks series. Section V describes how we analyze the external validity of the findings.

I. Additional Results

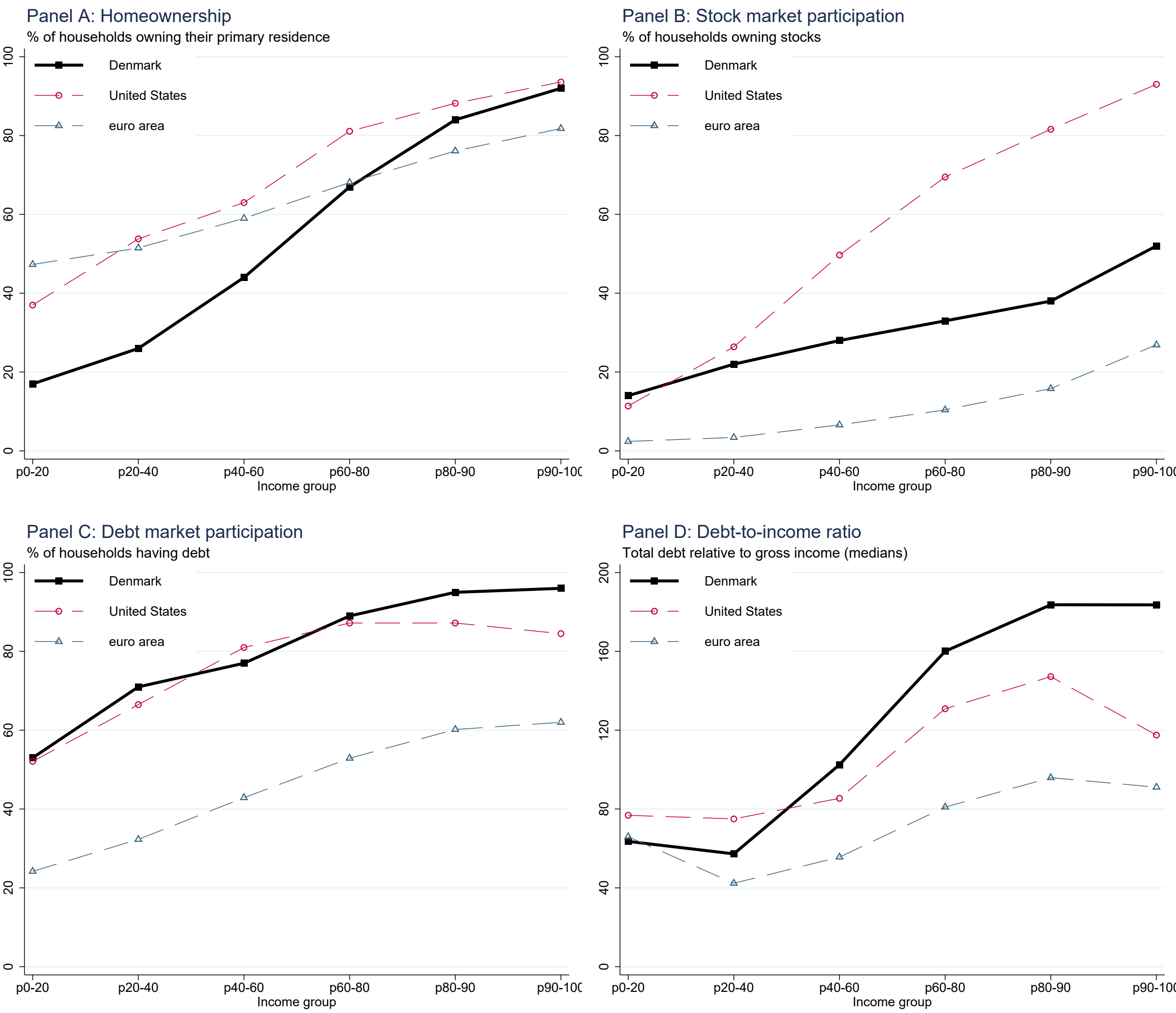

Figure IA.1: Household financial characteristics by income and economy. The figure shows how a range of household financial characteristics vary by income in Denmark (black lines), the United States (red lines) and the euro area (blue lines) in 2013 to 2014: the share of households owning their primary residence (Panel A), the share of households that own stocks (Panel B), the share of households with any debt (Panel C), and the ratio of median debt to median income (Panel D). Data for the United States are from the Survey of Consumer Finance, 2013, Tables 1, 7, 9, and 13. Data for the euro area are from the Household Finance and Consumption Survey, 2014, Tables B3, C5, E5, E6, and I1. Data for Denmark are from administrative micro-data for 2014.

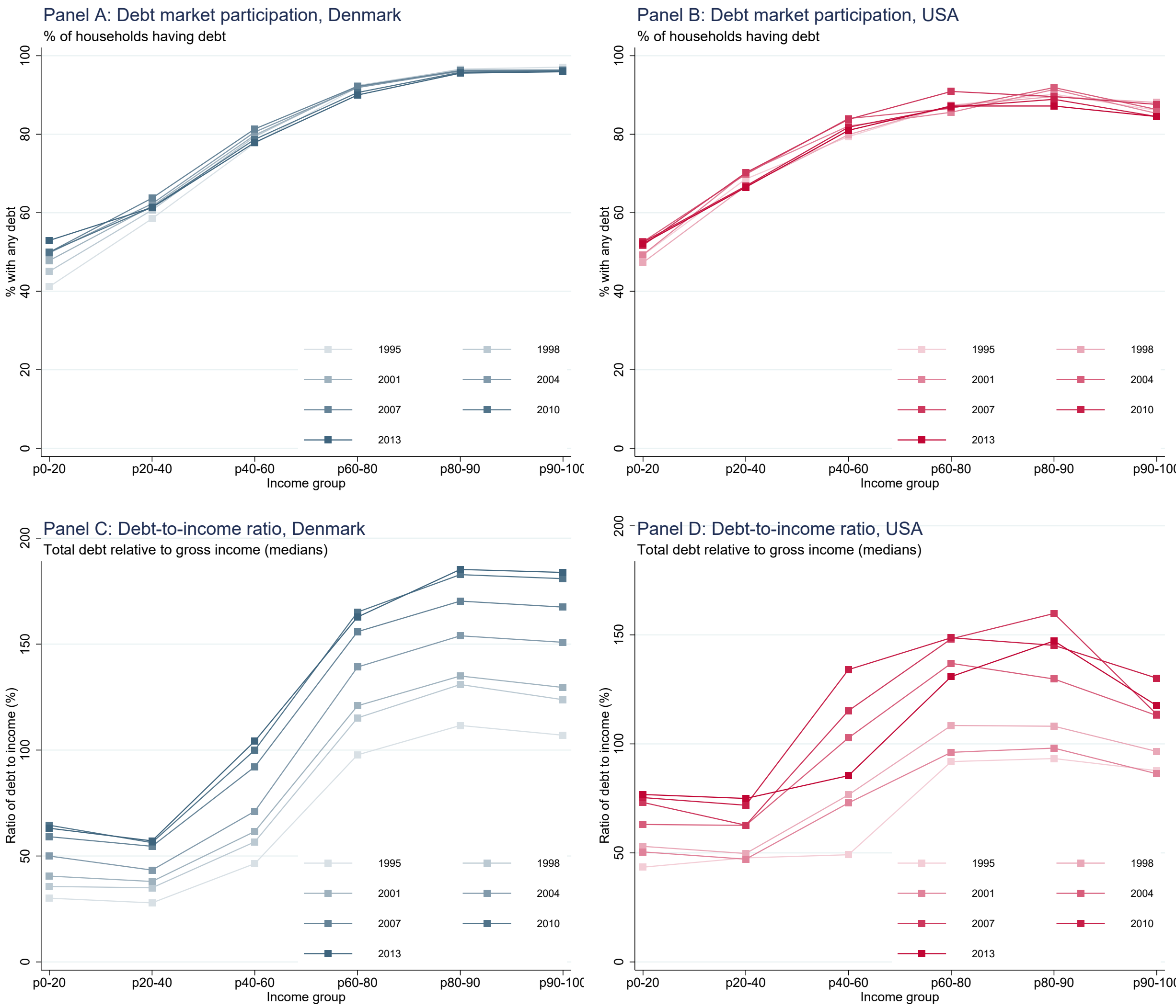

Figure IA.2: Household debt by income, economy, and over time. The figure shows how the extensive and intensive margins of debt market participation vary by income over time in Denmark (blue lines) and the United States (red lines): the share of households with any debt (Panels A and B)and the ratio of median debt to median income (Panels C and D). Data for the United States are from the Survey of Consumer Finance, 2013, Tables 1 and 13. Data for Denmark are from administrative micro-data.

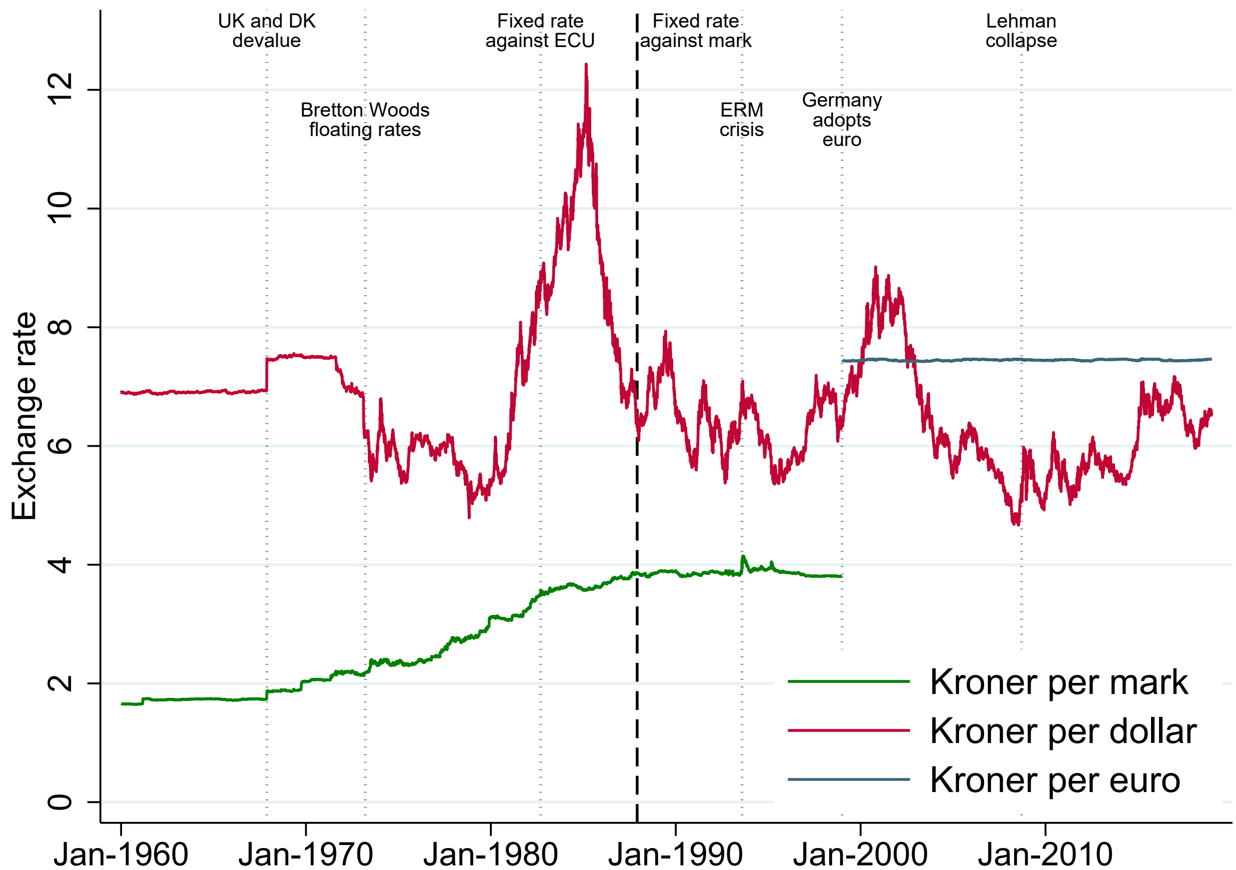

Figure IA.3: Exchange rates. The figure shows the following daily exchange rates: Danish kroner per German mark (1/1/1960 to 12/31/1998), Danish kroner per euro (1/1/1999 to 12/31/2018), and Danish kroner per U.S. dollar (1/1/1960 to 12/31/2018). The dashed lines indicate major events affecting the exchange rates.

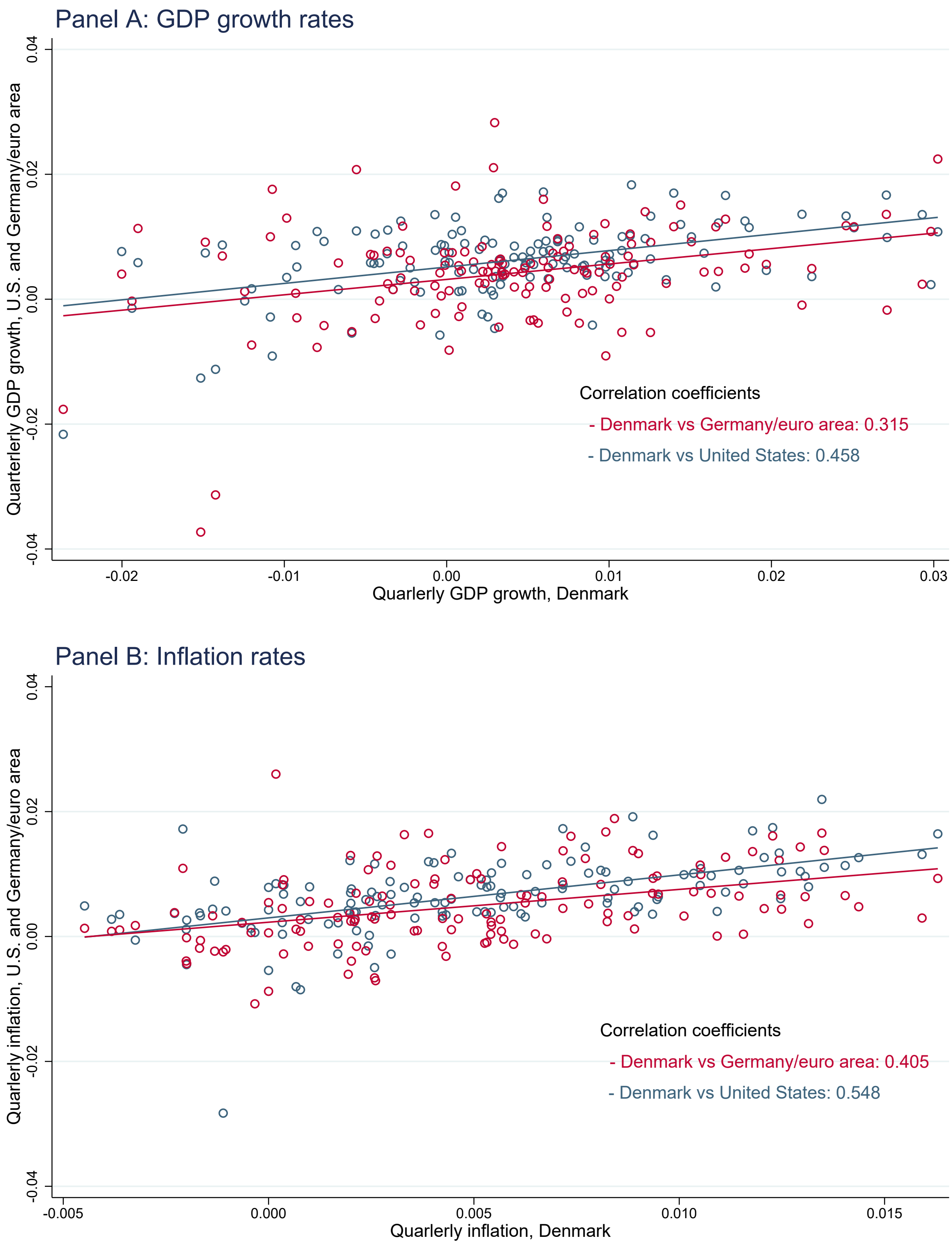

Figure IA.4: Cross-country correlations in macro outcomes. The figure shows the correlation in GDP growth rates (Panel A) and inflation rates (Panel B) between Denmark and Germany/euro area (red dots) and between Denmark and the United States (blue dots).

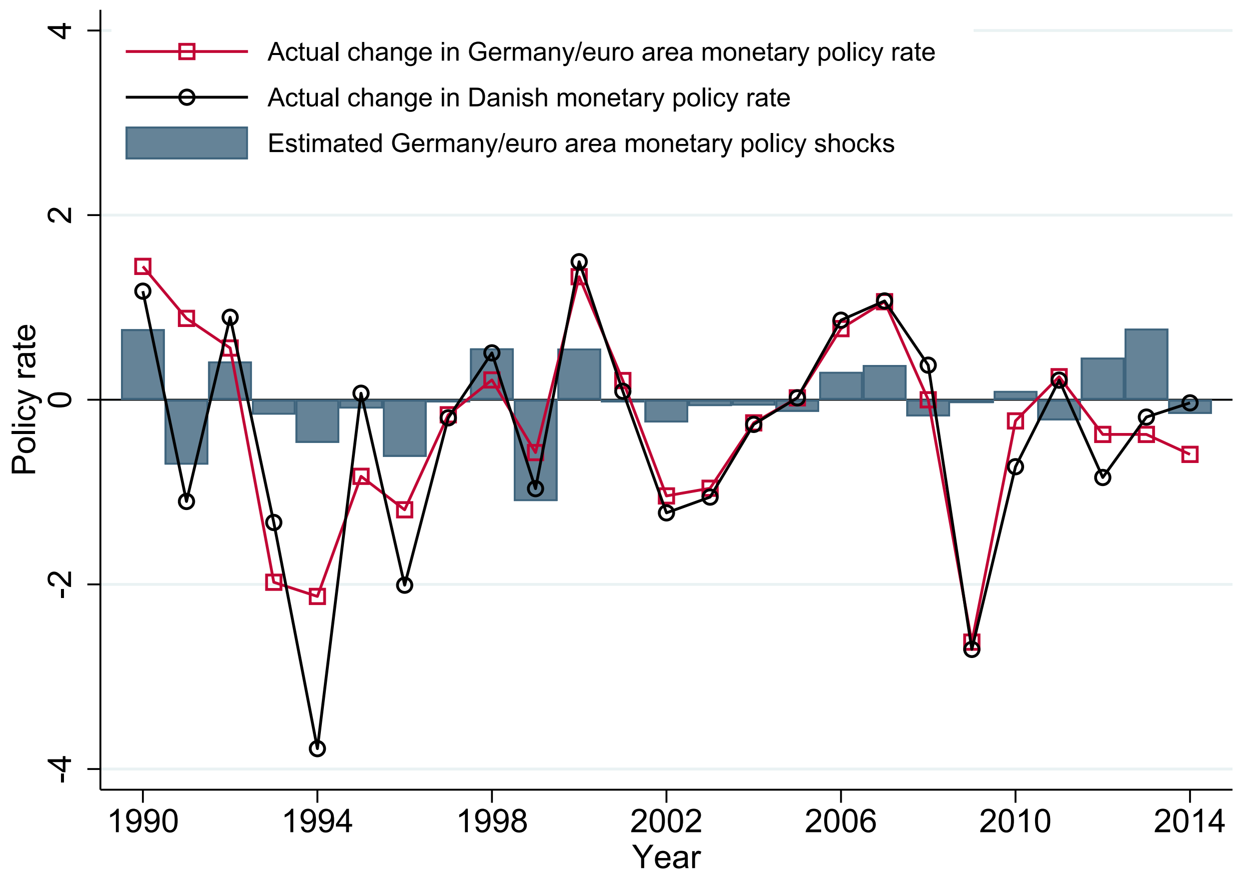

Figure IA.5: Monetary policy shocks. The figure shows the annual change in the policy rate in Germany / euro area (red line), the annual change in the policy rate in Denmark (black line), and the residual variation in the policy rate in Germany / euro area after regressing on the macro-controls in the baseline model, that is, contemporaneous and lagged values of GDP growth and inflation and forecasts for GDP growth and inflation (blue bars).

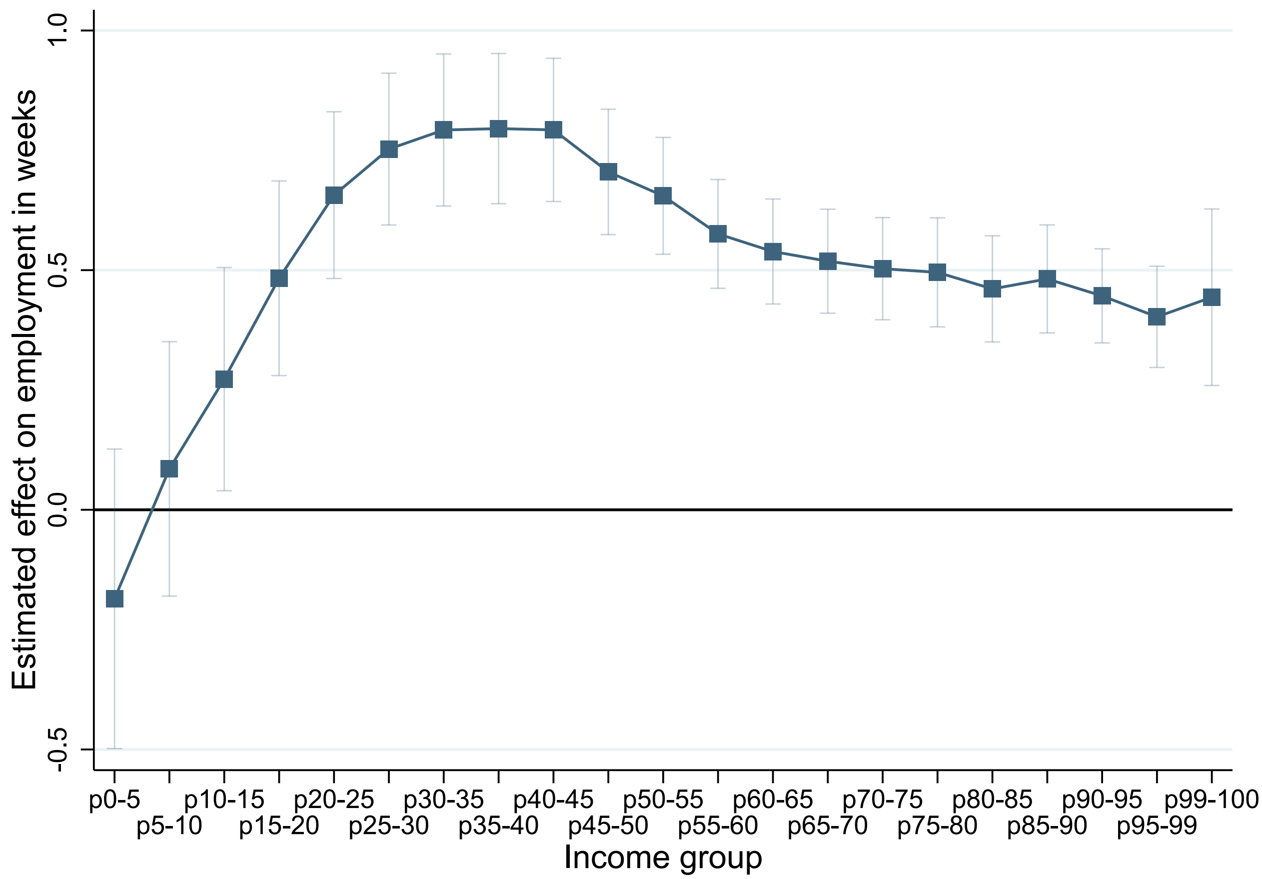

Figure IA.6: Heterogeneous effects on employment. The figure shows the estimated effect of a one-percentage-point decrease in the monetary policy rate on employment (in weeks) at different positions in the income distribution over a two-year horizon.

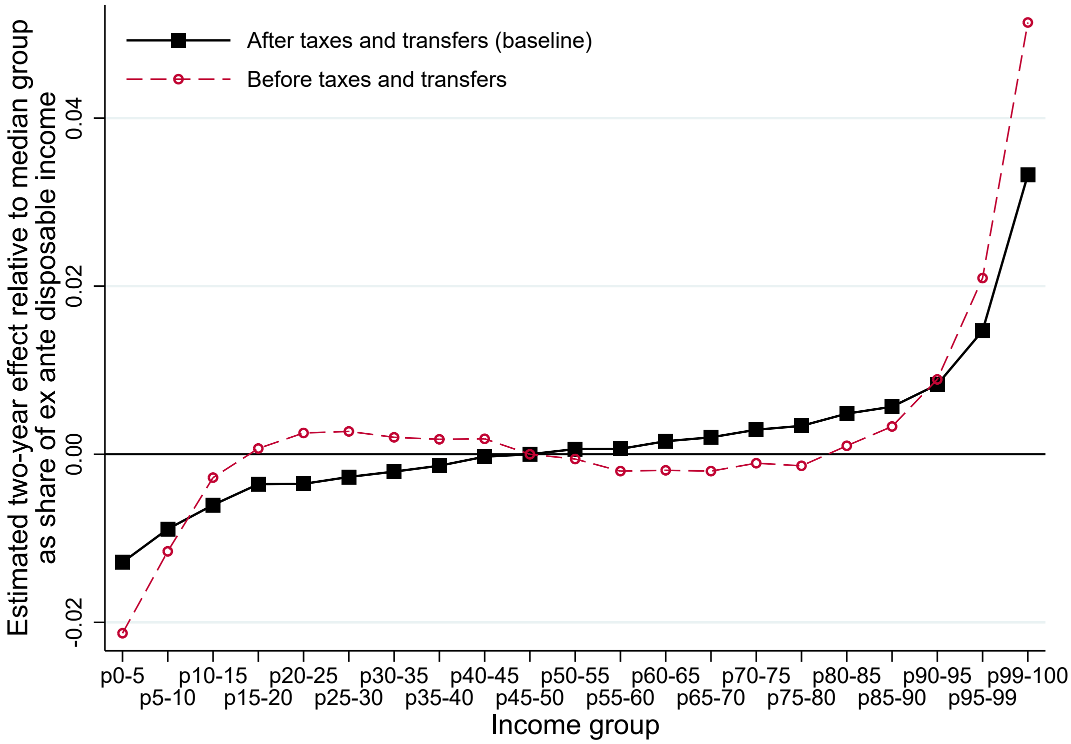

Figure IA.7: Market disposable income. The figure shows the estimated two-year effects of a one-percentage-point decrease in the monetary policy rate on disposable income (full black line) and market disposable income, measured before government transfers and taxes (dashed red line).

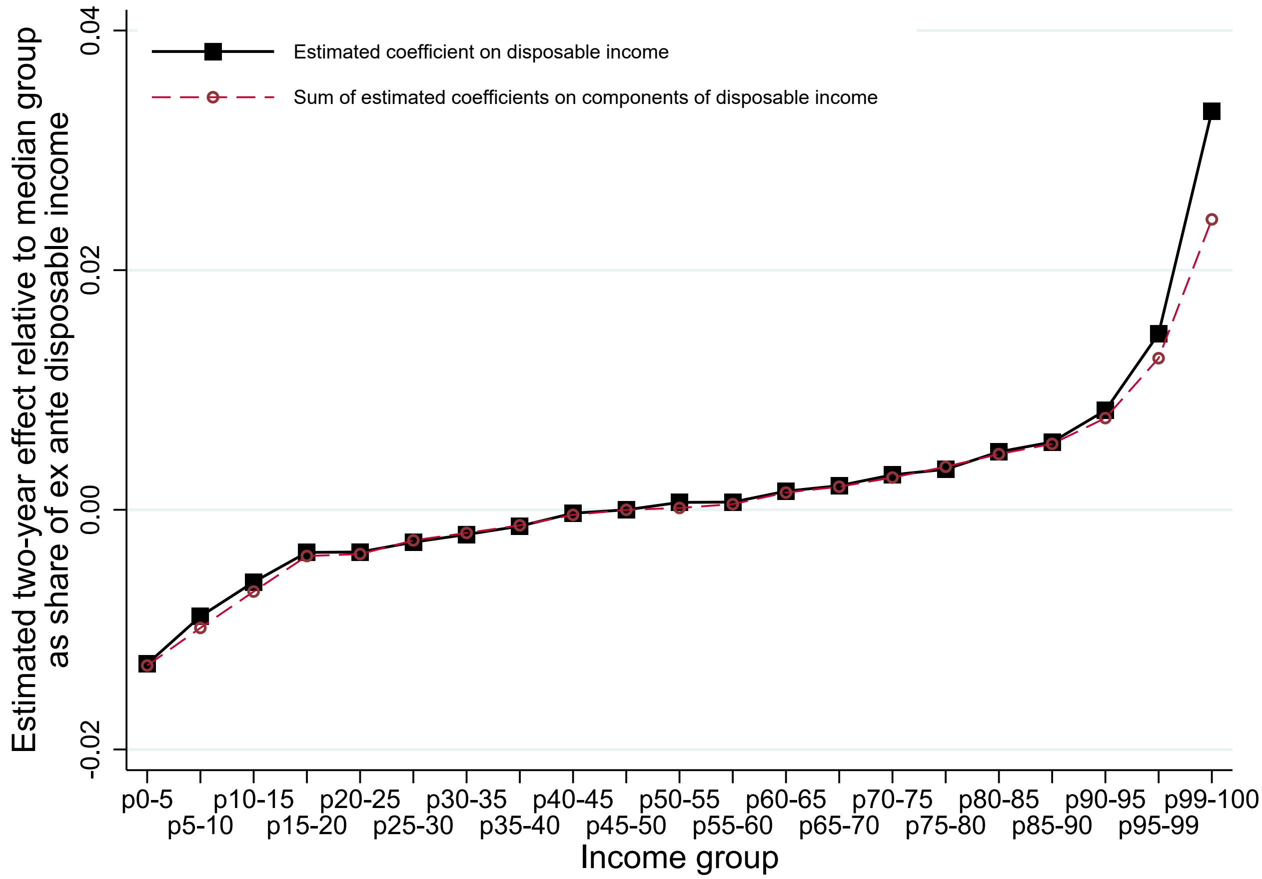

Figure IA.8: Adding up effects on disposable income. The figure compares, at each position in the income distribution, the estimated two-year effect of a one-percentage-point decrease in the policy rate on disposable income (solid black line) to the sum of the estimated effects on the components of disposable income (dashed red line).

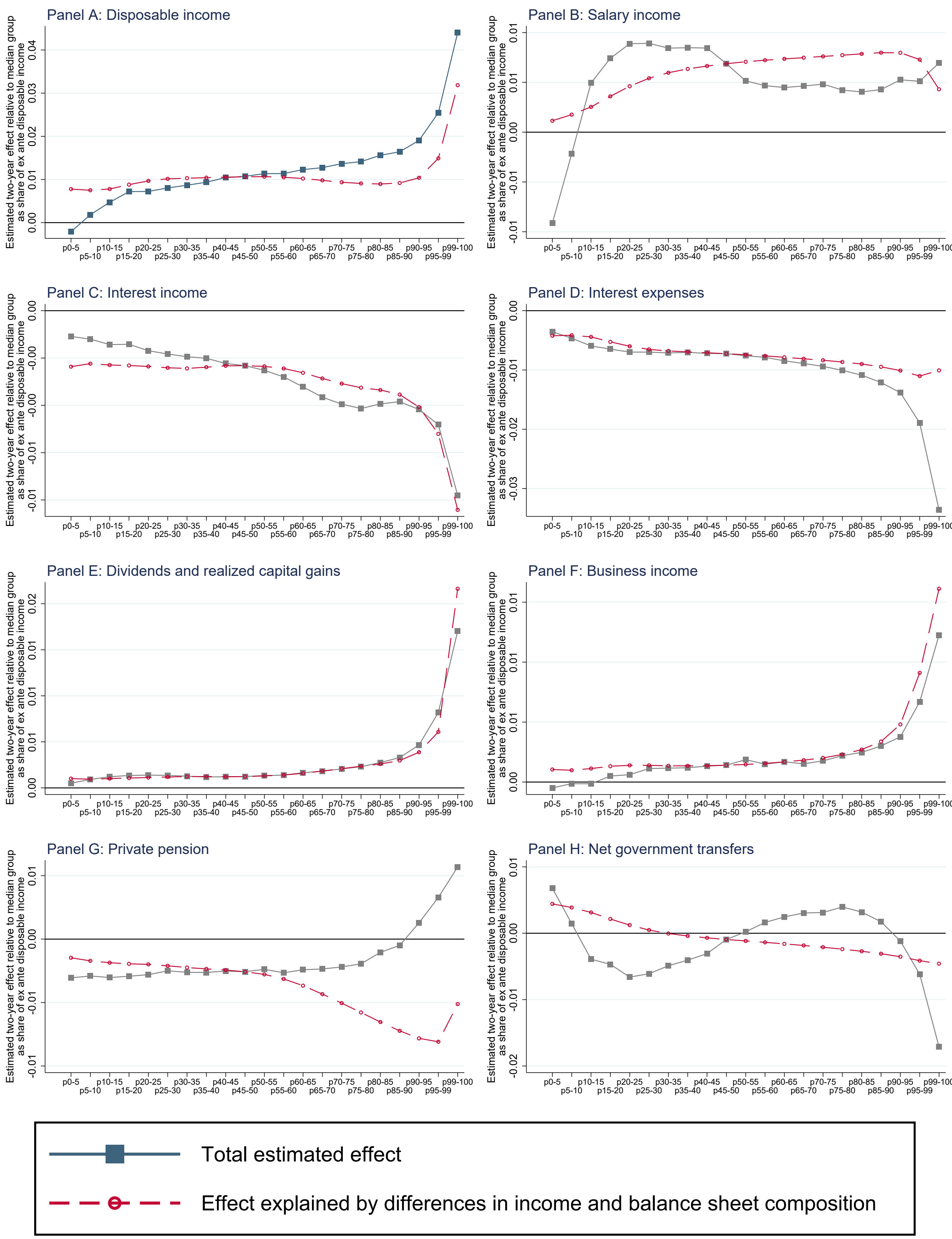

Figure IA.9: The role of income and balance sheet composition. The figure shows, for each component of disposable income (Panels B to H) and for disposable income itself (Panel A), the estimated two-year effect of a one-percentage-point decrease in the monetary policy rate (solid lines) and the part of the effect that is explained by differences in the composition of income and balance sheets (red dotted lines).

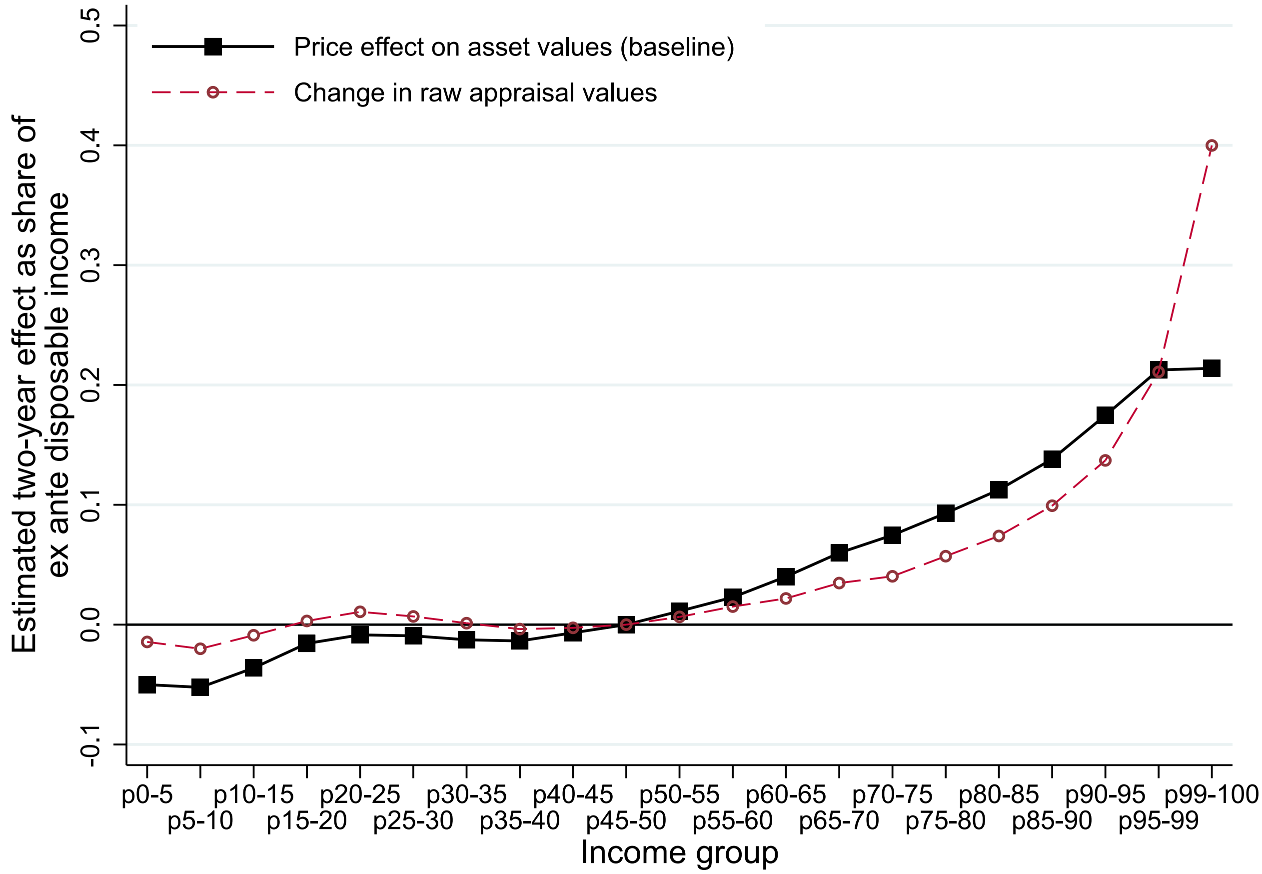

Figure IA.10: Robustness of heterogenous effects on housing values. The figure compares the estimated ”price effect” of a one-percentage-point decrease in the policy rate on housing wealth (solid black line) to the effect on the raw change in the appraisal values of housing (dashed red line).

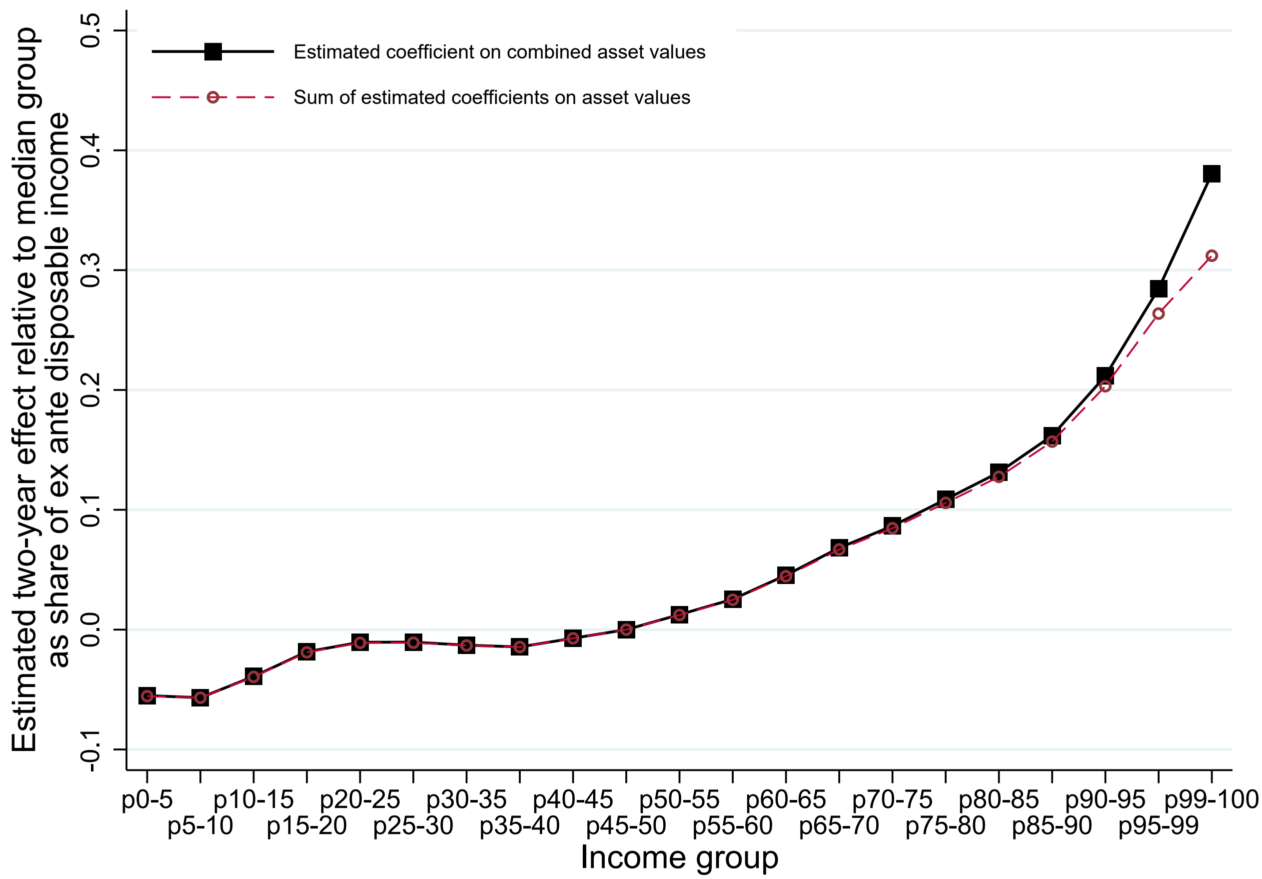

Figure IA.11: Adding up effects on asset values. The figure compares, at each position in the income distribution, the estimated two-year price effect of a one-percentage-point decrease in the policy rate on combined asset values (solid black line) to the sum of the estimated effects on the individual asset values (dashed red line)

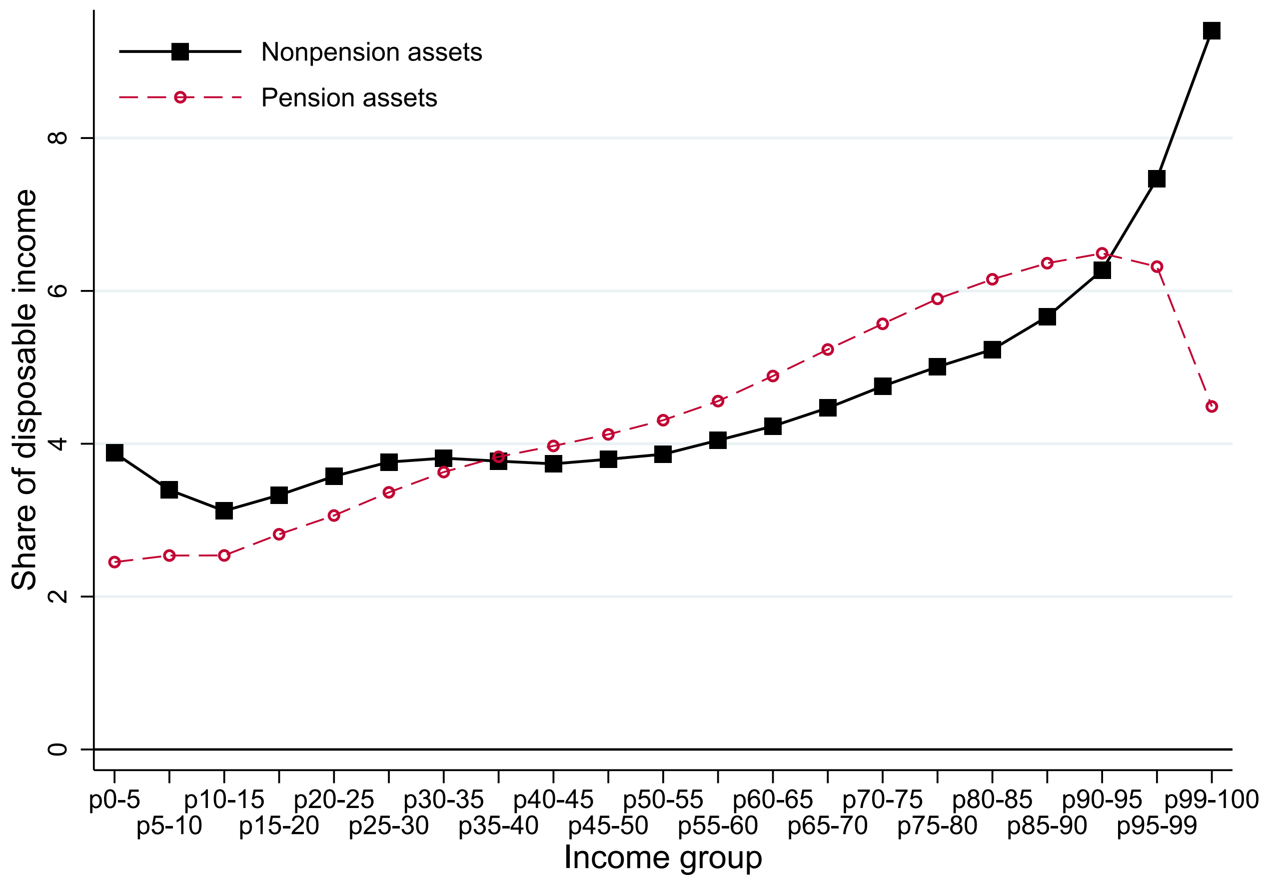

Figure IA.12: Pension wealth. The figure shows the ratio of assets to disposable income in 2014 at each position in the income distribution while distinguishing between assets outside of tax-favored pension schemes (solid black line) and asses within tax-favored pension schemes (dashed red line).

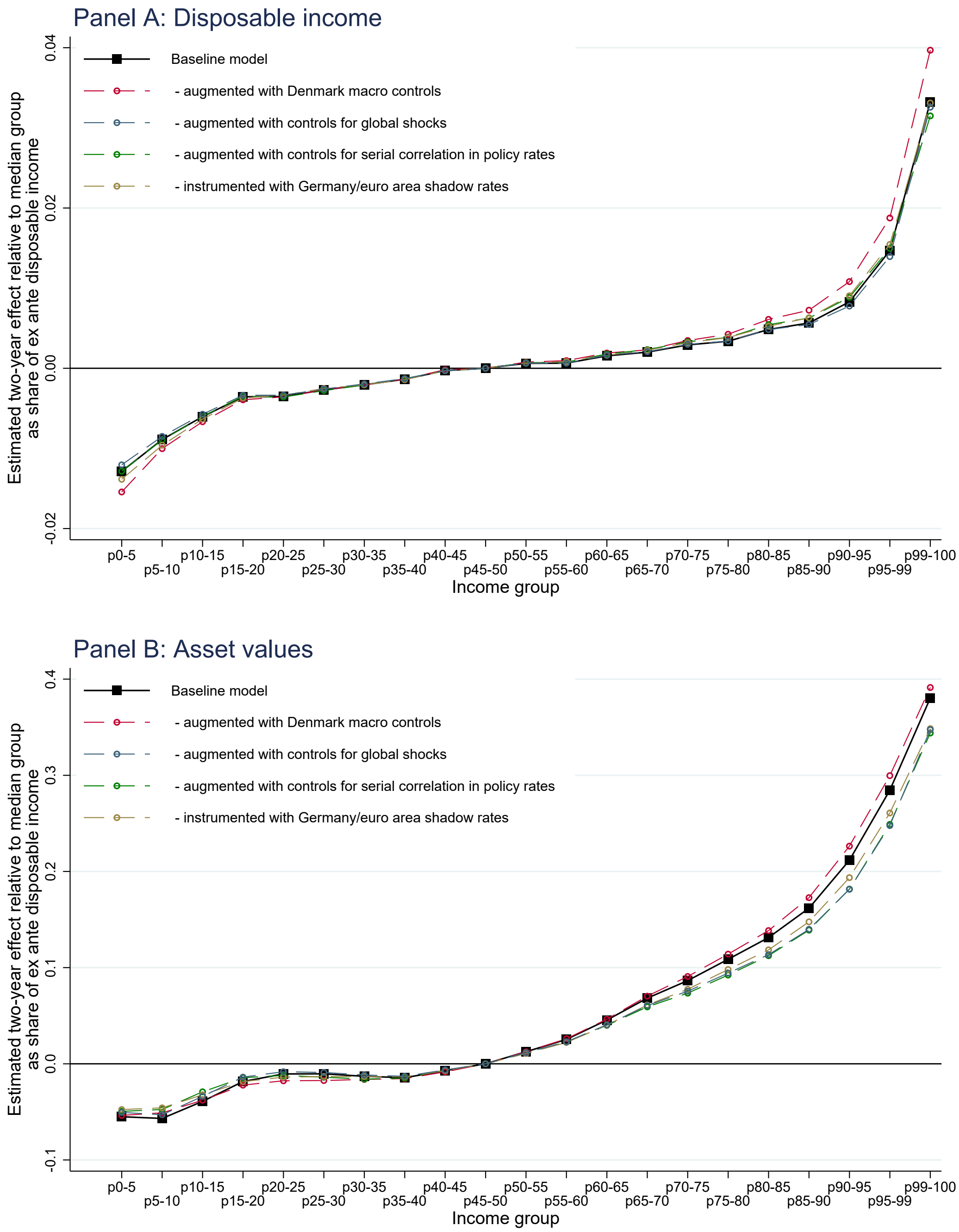

Figure IA.13: Sensitivity to additional macro controls and measurement. The figure shows the estimated differential effect of a one-percentage-point decrease in the monetary policy rate on disposable income (Panel A) and asset values (Panel B) at different positions in the income distribution over a two-year horizon obtained from models with additional macro controls and with alternative measurement and sample period. The figure compares the baseline results (black line) to the results from models that further control for ex ante GDP growth and inflation in Denmark (red line); control for the ex ante change in the VIX index (blue line), account for serial correlation in monetary policy rates by controlling for the leaded monetary policy shock (green line), and capture the German/euro monetary policy stance using the shadow rate rather than the policy rate (brown line). All additional controls are interacted with a full vector of income group indicators. The estimates are relative to the median group (p45-50).

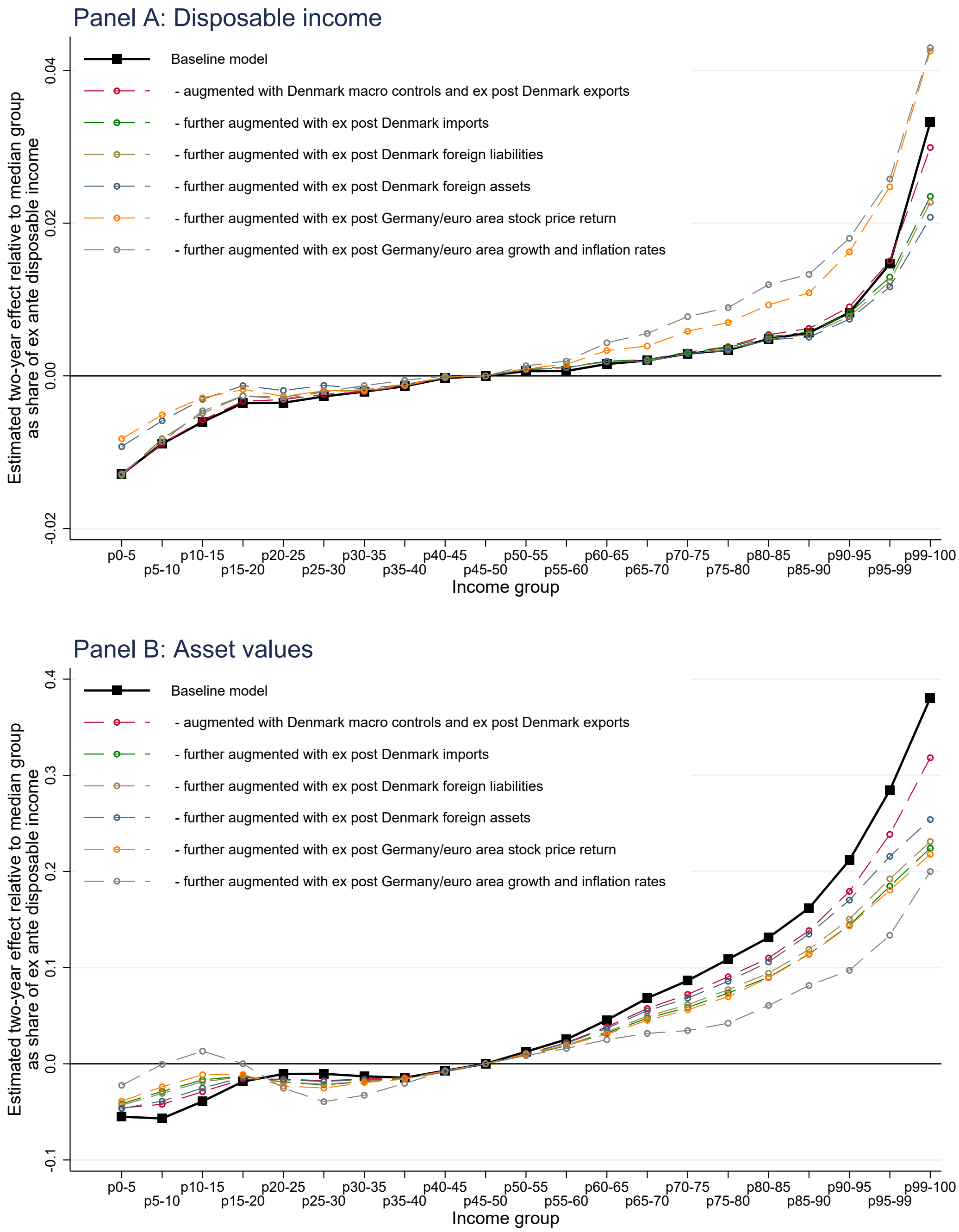

Figure IA.14: Sensitivity to ex post macro controls. The figure shows the estimated differential effect of a one-percentage-point decrease in the monetary policy rate on disposable income (Panel A) and asset values (Panel B) at different positions in the income distribution over a two-year horizon obtained from models with ex post macro controls (i.e., evaluated after the monetary policy shock). The figure compares the baseline results (black line) to models that include controls for ex ante GDP growth and inflation in Denmark and sequentially add the following variables: ex post exports from Denmark (red line), ex post imports to Denmark (green line), ex post Danish foreign liabilities (brown line), ex post Danish foreign assets (blue line), ex post realizations of the stock market index in Germany / euro area (orange line), and ex post realizations of GDP growth and inflation in Germany / euro area (gray line). All additional controls are interacted with a full vector of income group indicators. The estimates are relative to the median group (p45-50).

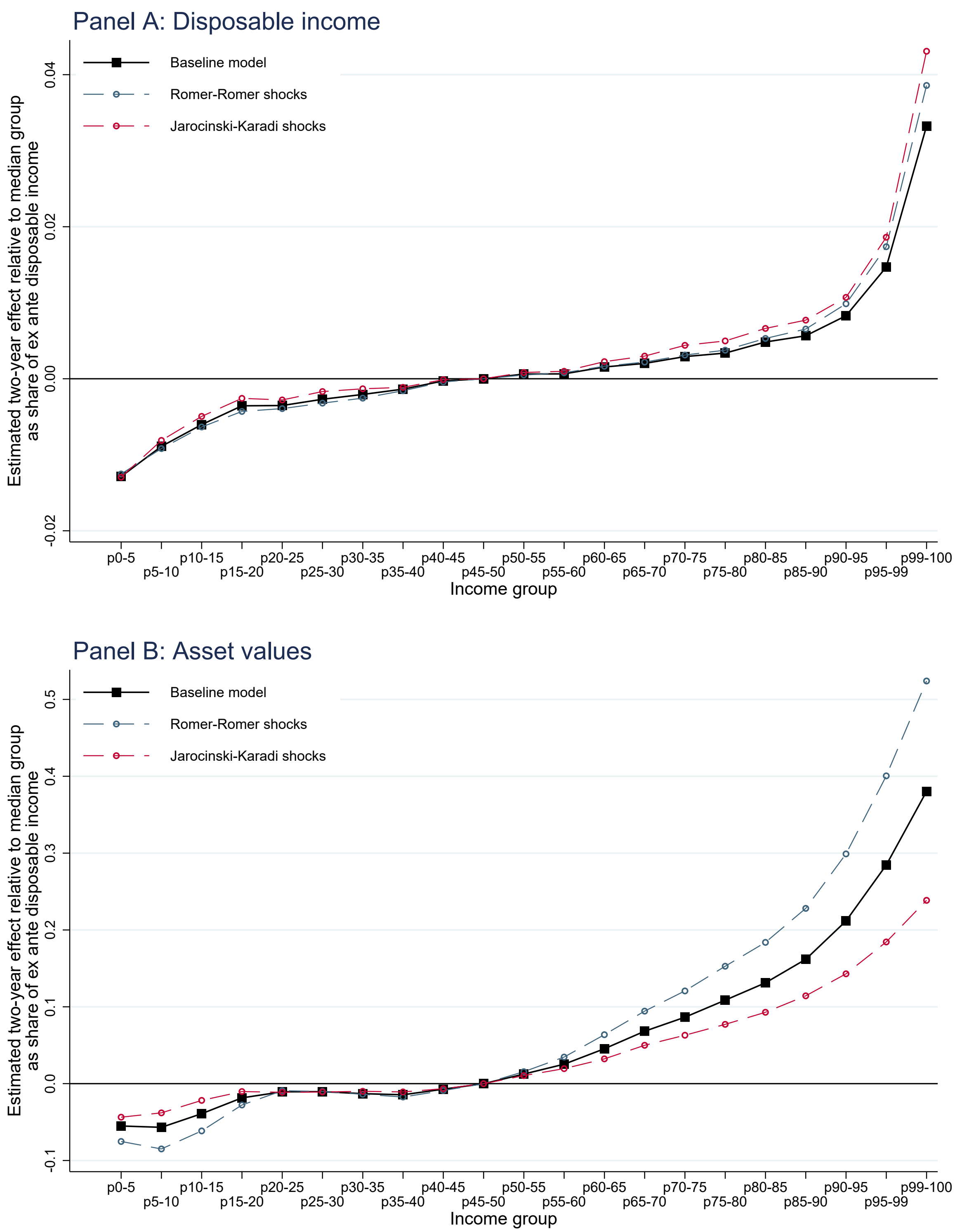

Figure IA.15: Sensitivity to identification of monetary policy shocks. The figure shows the estimated differential effect of a one-percentage-point decrease in the monetary policy rate on disposable income (Panel A) and asset values (Panel B) at different positions in the income distribution over a two-year horizon obtained from models using different series of monetary policy shocks. The figure compares the baseline results (solid black line) to models that identify monetary policy shocks in the spirit of Romer-Romer (dashed blue line) and Jarocinski-Karadi (dashed red line). More details about the exact estimation strategy are available in Section IV of the Internet Appendix.

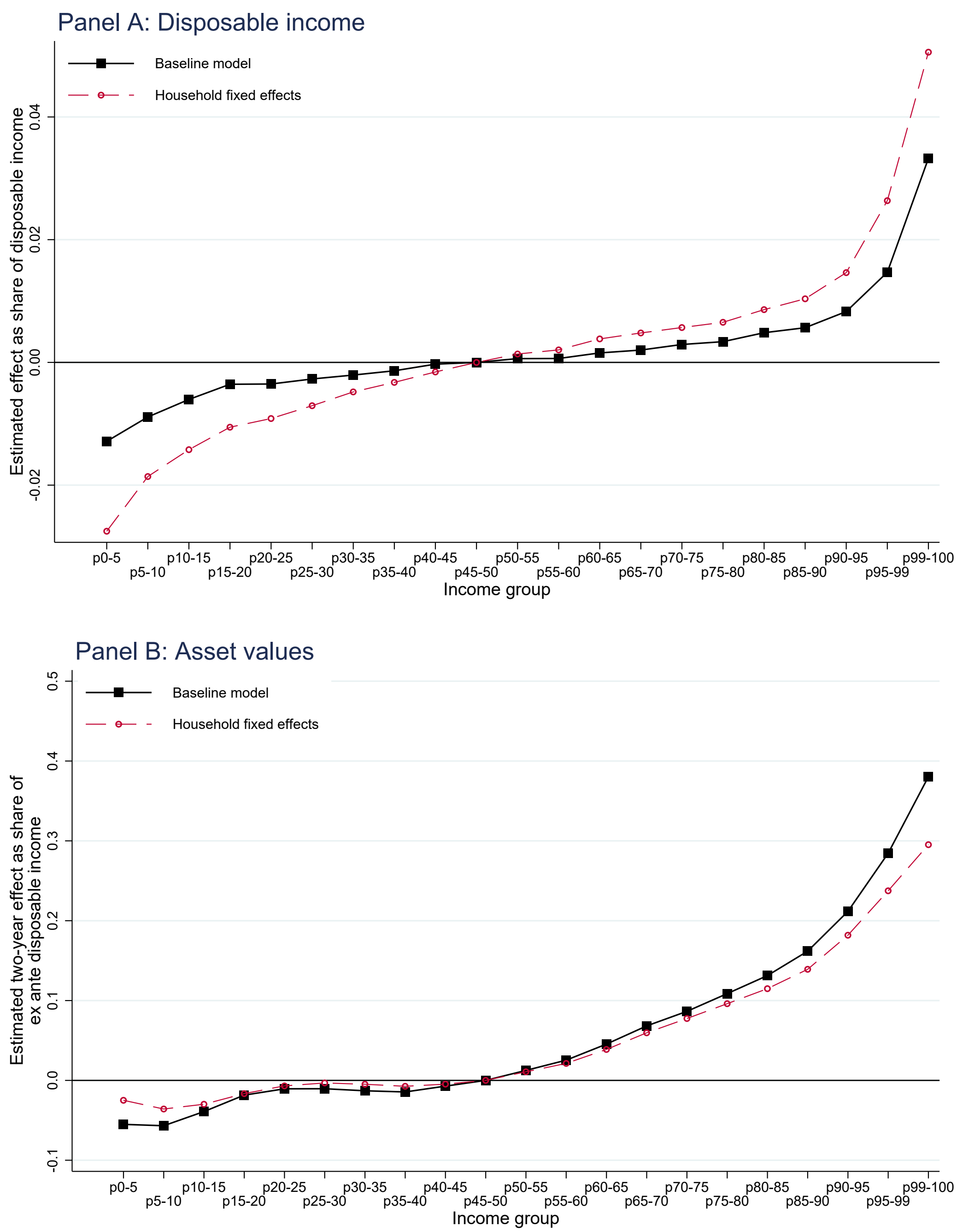

Figure IA.16: Sensitivity to household fixed effects. The figure shows the estimated differential effect of a one-percentage-point decrease in the monetary policy rate on disposable income (Panel A) and asset values (Panel B) at different positions in the income distribution over a two-year horizon obtained from the baseline model (solid black line) and a model augmented with household fixed effects (dashed red line). The estimates are relative to the median group (p45-50).

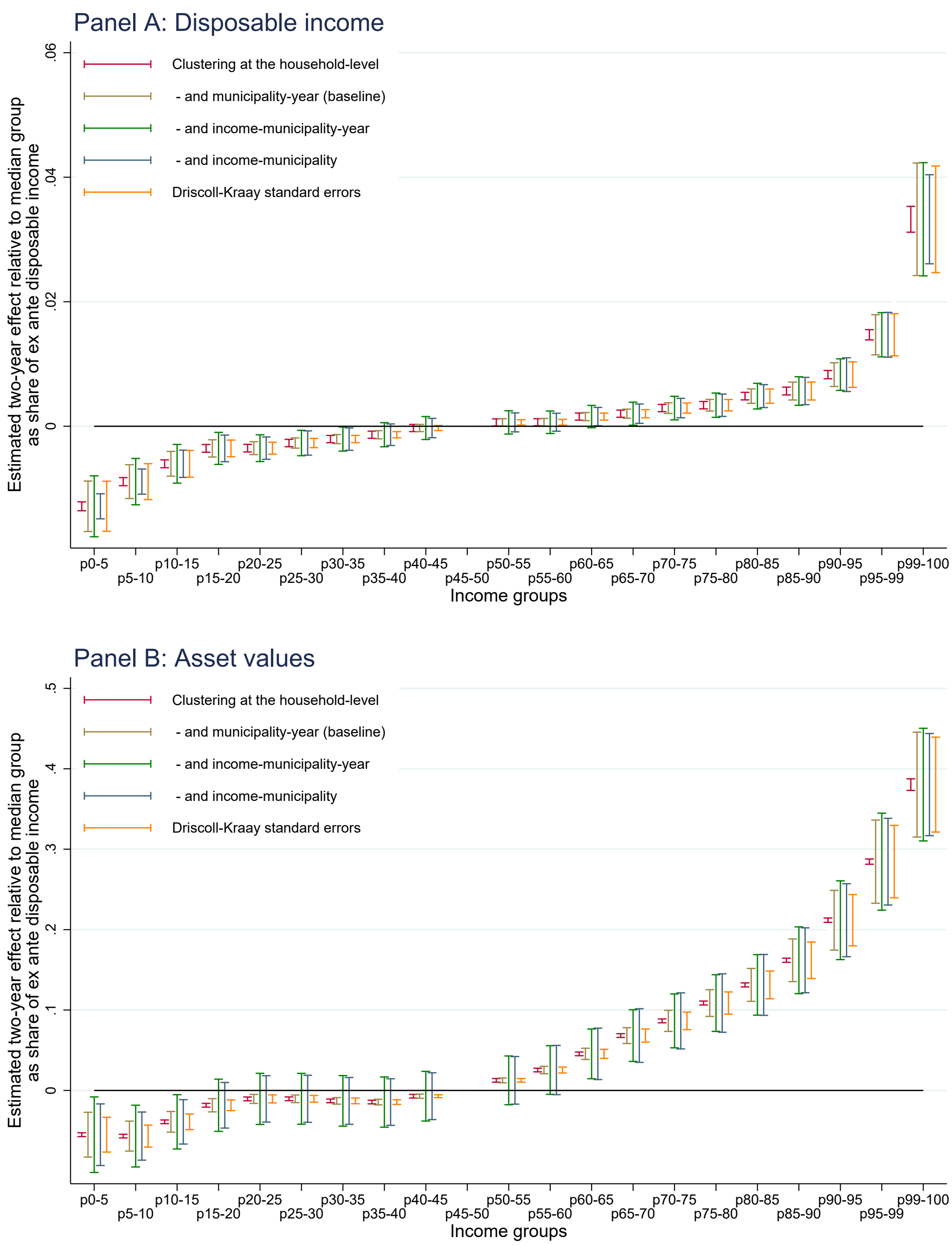

Figure IA.17: Sensitivity to clustering. The figure shows 95% confidence levels around the two-year differential effects of a one-percentage-point decrease in the monetary policy rate on disposable income (Panel A) and asset values (Panel B) under different assumptions: one-dimensional clustering at the household-level (red line), two-dimensional clustering at the household-level and municipality-year-level (brown line), two-dimensional clustering at the household-level and income-municipality-year-level (green line), two-dimensional clustering at the household-level and income-municipality-level (blue line), Driscoll-Kraay standard errors (orange line).

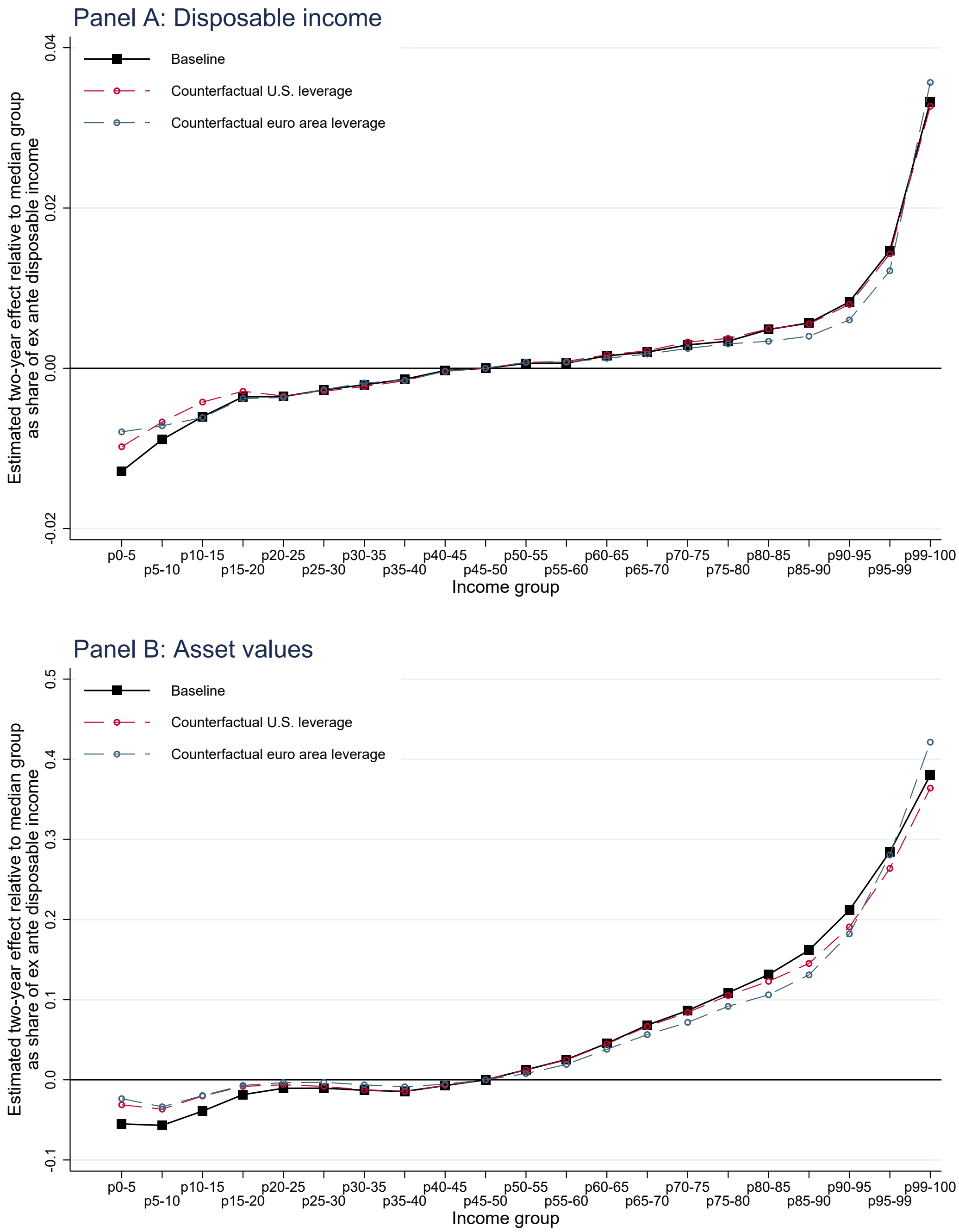

Figure IA.18: Sensitivity to reweighting of observations. The figure shows the estimated differential effect of a one-percentage-point decrease in the monetary policy rate on disposable income (Panel A) and asset values (Panel B) at different positions in the income distribution over a two-year horizon obtained from models using different weighting schemes. The figure compares the baseline results (solid black line), to models that reweight observations so as to achieve, within each broad income group, the same fraction of households with any debt and the same median debt-to-income ratio for households with debt as in the United States (dashed red line) and the euro area (dashed blue line). The estimates are relative to the median group (p45-50).

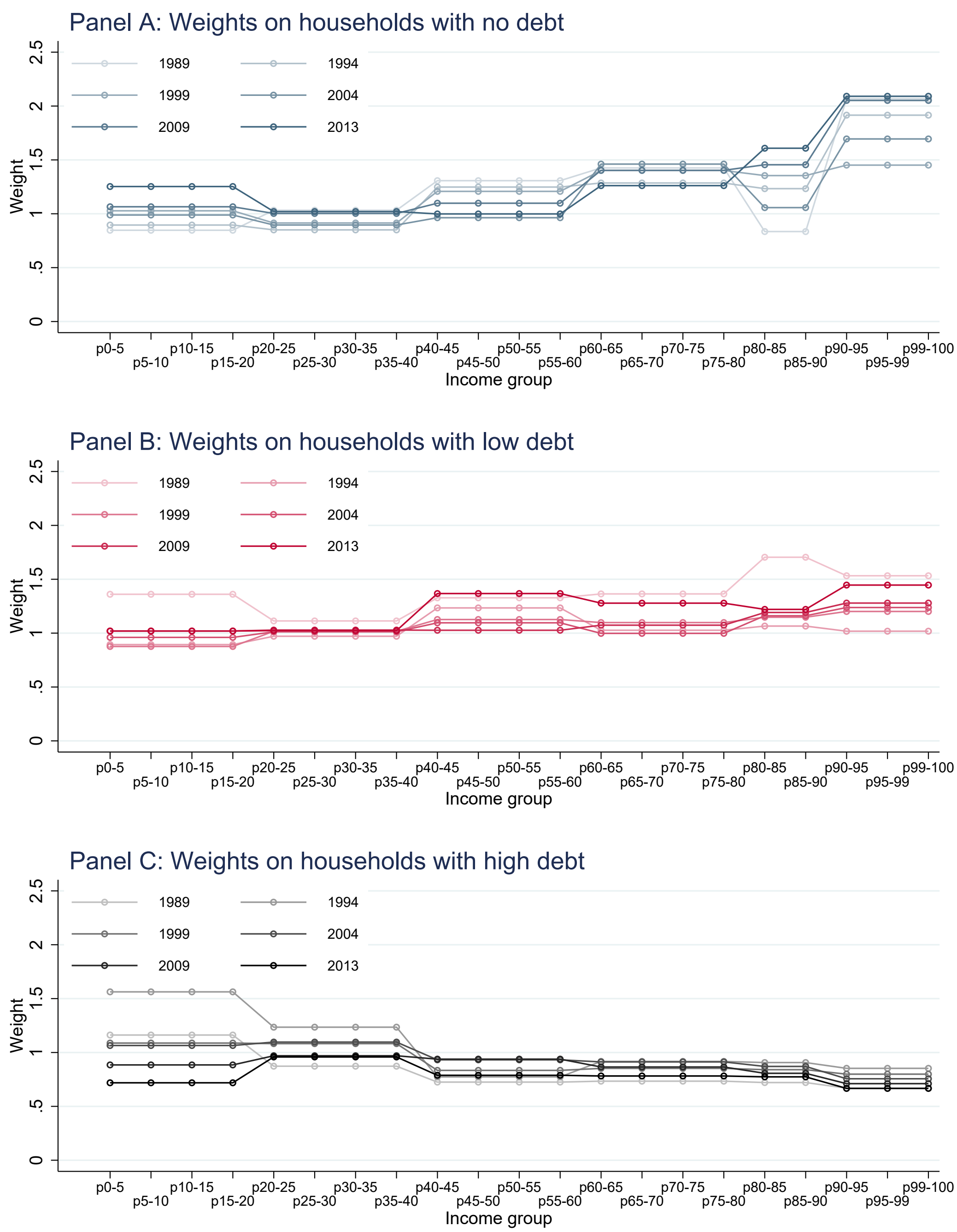

Figure IA.19: Weighting scheme. The figure shows the weights on Danish observations, by income group and year, necessary to match the fraction with zero debt and the median debt-to-income ratio for those with positive debt observed for U.S. households. The weights vary across households with no debt (Panel A), households with positive debt and a debt-to-income ratio below the U.S. median in the relevant year and income group (Panel B), and households with positive debt and a debt-to-income ratio above the U.S. median in the relevant year and income group (Panel C).

Table IA.I
Owners of Danish mortgage bonds

The table allocates outstanding Danish mortgage bonds by different types of owners over the period 1999 to 2014.

Nonfinancial firms	5.5%
Financial firms	42.4%
Insurance companies and pension funds	26.4%
Public Sector	4.6%
Households	6.3%
Foreign investors	12.1%
Unallocated	1.4%

Table IA.II
Descriptive statistics by age

The table describes the composition of disposable income (Panel A) and net wealth (Panel B) as well as some important behavioral margins (Panel C) by age groups. The category *deposits* also includes bonds. All income and wealth components are expressed as a fraction of disposable income. To construct Panels A and B, we aggregate each income and wealth element within each age group over the sample period and divide with disposable income aggregated similarly. In Panel B, *disposable income* sums salary income, business income, stock market income, interest income, private pension income, other income, and net government transfers and subtracts interest expenses. In Panel C, *net wealth* sums deposits, stocks, and housing and subtracts debt.

	25-35 years	35-45 years	45-55 years	55-65 years	65-75 years	>75 years
	Panel A: Composition of disposable income (each component in % of overall disposable income)					
salary income	140%	144%	141%	111%	27%	2%
business income	6%	12%	16%	16%	9%	3%
stock market income	1%	2%	3%	5%	5%	4%
interest income	1%	1%	2%	3%	6%	9%
private pension	0%	0%	1%	6%	36%	34%
other income	1%	1%	2%	2%	3%	3%
net government transfers	-32%	-41%	-46%	-28%	23%	49%
interest expenses	18%	20%	19%	14%	9%	4%
disposable income	100%	100%	100%	100%	100%	100%
	Panel B: Composition of balance sheets (each component in % of overall disposable income)					
deposits	31%	39%	58%	95%	175%	241%
stocks	6%	8%	14%	26%	53%	81%
housing	256%	373%	426%	496%	570%	448%
debt	264%	316%	292%	247%	187%	79%
net wealth	29%	105%	206%	371%	611%	690%
	Panel C: Descriptive indicators					
is net creditor	47%	58%	69%	80%	90%	96%
has no debt	12%	9%	10%	16%	35%	65%
holds stocks	22%	27%	33%	39%	43%	39%
owns real estate	44%	61%	67%	69%	62%	44%
is self-employed	8%	13%	17%	16%	10%	5%
buys new car	3%	4%	5%	4%	3%	1%

Table IA.III
Romer-Romer monetary policy shocks

The table shows results from regressions at the frequency of meetings in the ECB monetary policy committee, where the dependent variable is the change in the monetary policy rate from before the meeting to after the meeting. We present more details in Section IV of the Internet Appendix.

	Change in policy rate
Policy rate before meeting	-0.0548***
	(0.0114)
GDP growth, one-year-ahead forecast	0.123***
	(0.0287)
Inflation, one-year-ahead forecast	0.224***
	(0.0531)
GDP growth, forecast innovation	0.102
	(0.0568)
Inflation, forecast innovation	-0.0218
	(0.0779)
GDP growth, nowcast	-0.0221
	(0.0141)
Inflation, nowcast	-0.0312
	(0.0260)
GDP growth, nowcast innovation	0.0622
	(0.0465)
Inflation, nowcast innovation	-0.0205
	(0.0961)
Constant	-0.391***
	(0.0782)
Observations	225

II. Property Values

From the real estate transaction register (”EJSA”), we have information about each property transaction, including the transaction price, the tax value of the property and a unique property identifier. From the property register (”BOL”), we obtain information about property characteristics (e.g., type of property, number of square meters).

To construct the house price index, we consider private transactions of single-family houses that are traded no more than two times within the year. Following Finance Denmark (2014), we further restrict the sample to: (i) houses for which the number of square meters is between 25 and 750, (ii) transactions with sales price between DKK 100,000 and DKK 25,000,000, (iii) transactions with sales prices per square meter between DKK 1,000 and DKK 200,000.

For the transactions satisfying these criteria, we calculate the sales price per square meter and the tax value per square meter, and we winsorize both metrics at the 2.5 and 97.5 percentiles each year.

Within each municipality-year, we calculate the average sales price per square meter, which we define as the *price level* in the municipality-year. We also calculate an *adjustment factor* within each municipality- year as the sum of the sales price per square meter divided by the sum of the tax values per square meter. The adjustment factor serves to approximate the market value of nontraded properties based on tax values.

Finally, based on the price level series, we construct a municipality-specific house price index. To compute the change in the asset value of a given property, we apply the index to the estimated market value of the property, which is the tax value stepped up with the adjustment factor.

For example, assume that a property in municipality m has tax value 80 at the end of year t, the adjustment factor for municipality m in year t is 1.25, and the price index indicates an increase in the price level of properties in municipality m between year t and year $t+1$ of 10%. The estimated market value of the property at the end of year t is then 100, the tax value of 80 stepped up by the adjustment factor 1.25, and the estimated increase in the value of the property over year $t+1$ is 10, that is, the 10% price increase applied to the estimated market value of 100.

The available micro-data allow us to calculate price levels and adjustment factors for the period 1992-2013. In the few sample years outside of this period we use the national house price index from Abildgren (2018) instead of the municipality-specific price index. We apply the adjustment factor for 1992 and 2013 to years before 1992 and after 2013, respectively.

III. Monetary Policy in Denmark

Denmark participated in the first attempts to reduce exchange rate volatility in Europe after the collapse of the Bretton Woods system in 1973. This cooperation evolved into the Exchange Rate Mechanism (ERM) in 1979 with exchange rates between European currencies floating within relatively narrow bands. In this period, Denmark suffered from high inflation rates and repeatedly devalued the target value of the Danish kroner within the ERM to restore its competitiveness and reduce external imbalances. Consequently, interest rates were high because investors required a premium to compensate them for the expected future depreciation of the Krone.

In a sharp and lasting policy reversal, the center-right government coming into office in 1982 almost immediately announced that it was firmly committed to a fixed exchange rate. The exchange rate target was first stated in terms of ECU, a weighted average of the currencies participating in ERM, and, in 1987 was restated in terms of German mark. The economic rationale of the policy was to reduce inflation by shifting market expectations. If two countries permanently maintain a fixed exchange rate, their inflation rates should eventually converge. To the extent that markets perceived the commitment to a fixed exchange rate with Germany to be credible, expectations about German inflation should anchor expectations about Danish inflation.

When 12 members of the European Union adopted the euro in 1999, Denmark remained outside the monetary union: a popular vote in Denmark had rejected the treaty introducing the euro and a political compromise allowed Denmark to opt out while the other ERM countries proceeded toward a common currency. The monetary collaboration between Denmark and the euro area was formalized in ERM II: the peg was restated in terms of euro with a target exchange rate that was an exact conversion of the existing target in German mark.

Figure IA.3 illustrates the exchange rates of Danish kroner relative to German mark, euro, and U.S. dollar. Between the collapse of Bretton Woods and the announcement of the fixed exchange rate regime (1973 to 1982), kroner depreciated quickly against mark, losing almost half of its value in less than a decade. In the first years of the fixed exchange rate regime (1982 to 1987), kroner was pegged to ECU and continued to depreciate slightly against mark although at a much slower pace: as other ERM countries occasionally devalued their currencies against mark, a fixed rate against ECU implied a depreciation against mark.

By contrast, in the period in which kroner was pegged to mark (1987 to 1998), the fluctuations around the target rate were generally small and well within the acceptable bands of 2.25%.

The only notable exception was the temporary depreciation in August 1993 in the context of massive volatility in European currency markets, with speculative attacks forcing a number of European countries to adjust or even give up their currency pegs.[1] In the past two decades (1999 to 2020), kroner has been pegged to euro and the exchange rate between the two currencies has been almost completely fixed. The highly volatile exchange rate of kroner against U.S. dollar over the past 50 years serves as a useful comparison.

Figure 1 illustrates the leading monetary policy rates in Denmark, Germany, and the euro area. The spread between Denmark and Germany increased significantly after the first oil crisis in 1973 and generally hovered around 10 percentage points in the late 1970s and early 1980s, reflecting the pronounced difference in inflation rates and the expected depreciation of Kroner. After the adoption of the fixed exchange rate regime, and notably after the peg was stated in terms of the German mark in 1987, the spread narrowed quickly. Since the early 1990s, the Danish policy rate has generally tracked the policy interest rate of the Bundesbank (until 1998) and the European Central Bank (from 1999) closely. The policy rate spread has been fairly constant and close to zero throughout the whole period.

The figures indicate that Danish monetary policy is conducted in accordance with standard theory for an economy with cross-border capital flows and a fixed exchange rate. In normal times, Denmark effectively imports its monetary policy stance from Frankfurt: when the European Central Bank changes its leading interest rate to pursue some policy objective for the euro area, the Danish central bank generally changes its rate by the same amount on the same day to restore the interest rate differential that is consistent with a fixed exchange rate. On rare occasions, however, the exchange rate objective requires that the policy rate be changed unilaterally. The Danish policy rate was temporarily raised far *above* the German/euro area rate when uncertainty in global currency markets caused capital to flow out of kroner: during the speculative attacks in 1992 to 1993, when Mexico and Russia abandoned their currency pegs in 1994 and 1998, and when Lehman Brothers failed in 2008. More recently, the Danish policy rate has often been slightly *below* the euro area rate to prevent excessive capital flows into kroner: during the European debt crisis in 2011 and when Switzerland suddenly abandoned its peg to the euro in 2015.

[1] A major attack on kroner occurred in February 1993 when a center-left government came into office on a policy agenda emphasizing job creation and growth. The new government quickly affirmed its commitment to the fixed exchange rate and the Danish central bank successfully defended the peg to mark with interventions in currency markets and temporary increases in the policy rate. However, when the entire ERM came under attack and it was agreed to expand the fluctuation bands from 2.25% to 15%, Kroner depreciated temporarily against mark. The United Kingdom famously left the ERM as a consequence of this currency attack.

In sum, by committing to exchange rate stability, Danish monetary authorities have voluntarily renounced the ability to mitigate domestic shocks by adjusting the policy rate. Since 1987, keeping the exchange fixed has generally been achieved by mimicking the interest rate decisions made in Frankfurt; in rare periods of turmoil in global markets they have temporarily adjusted the interest rate spread.

IV. Alternative Monetary Policy Shocks Series

We estimate a series of monetary policy shocks for the euro area in the spirit of Romer and Romer (2004). The series is estimated at the frequency of the ECB's Governing Council monetary policy meetings, which take place once a month in most years. Meeting dates are available on the ECB's website. For each meeting, we record the change in the policy rate from the day before the meeting to the day after. To proxy for the information set available to policymakers at the time of the meeting, we use data from the most recent Macroeconomic Projections publication produced by either ECB or Eurosystem staff. If the most recent staff projections are more than 30 days old at the time of the meeting, we instead rely on the ECB Survey of Professional Forecasters (if more recent).

From these sources, we construct meeting-frequency series on nowcasts and one-year forecasts of annual inflation and real GDP growth in the euro area. We then regress the change in the policy rate on the forecast and nowcast variables and their innovations, defined as the change in projections for a given calendar year since the previous meeting. The level of the policy rate before the meeting is also included as an explanatory variable. Table IA.III presents the results of this regression. The one-year forecasts of GDP growth and inflation correlate positively and significantly with policy rate changes, while the coefficients on the nowcast and innovation variables are numerically small and statistically insignificant.

The regression residuals constitute a series of estimated monetary policy shocks, measured at the monetary policy meeting frequency. We convert this to an annual series by summing residuals within each calendar year. Unfortunately, this series only covers the period since the establishment of the ECB in 1999. To the best of our knowledge, the data necessary to construct a similar series for the early part of our analysis period, during which the Danish krone was pegged to the German mark, are not available. We therefore combine our series of Romer-Romer shocks with a series of "baseline" shocks covering the early years. These are constructed as the residuals from a regression of the annual change in the German/euro area policy rate on the same macroeconomic controls as in our baseline specification (lagged, current, and forecast values of GDP growth and inflation), using annual data for our full analysis period. We then use the combined series to instrument for the change in the Danish policy rate in equation (2). If we restrict the analysis to the subperiod, in which the Romer-Romer shocks are available, this alternative series of shocks still produces results that are similar to the baseline model.

We also use Jaricinski-Karadi monetary policy shocks for the euro area. These are identified from high-frequency movements in interest rates and stock prices around the time of monetary policy announcements, as explained in Jarocinski and Karadi (2020). We collapse the original series to an annual frequency by summing within each calendar year. As in the Romer-Romer case, the resulting series only goes back to 1999, so we combine it with our series of "baseline" shocks for the early part of our analysis period. We then use this combined series to instrument for the Danish policy rate change in equation (2). Again, if we restrict the analysis to the subperiod, in which the Jaricinski-Karadi shocks are available, this alternative series of shocks still produces results that are similar to the baseline model.

V. External Validity

To investigate the external validity of our main results, we reestimate the baseline model while reweighting the observations so that, within each income group and year, the fraction of Danish households with any debt and the median debt-to-income ratio of Danish households with positive debt match households in the United States and the euro area.

We obtain statistics on household debt in the United States from the Survey of Consumer Finance. Table 13 provides the fraction of households with any debt as well as the median value of debt for households with any debt in six income groups (p0-20, p20-40, p40-60, p60-80, p80-90, p90-100) while Table 1 reports the median pre-tax income in the same income groups. We compute the median debt-to-income ratio as the ratio of median debt to median income in each income group and year. The data are available for every third year since 1989 (i.e., 1989, 1992, 1995 and so on). For years for which no data are available we, use the value for the closest year (we use the 1989 value for 1990, the 1992 value for 1991, and so on).

We obtain statistics on household debt in the euro area from the Household Finance and Consumption Survey, 2014, Tables B3, C5, E5, E6, and I1. Table E5 reports the fraction of households with any debt in six income groups (p0-20, p20-40, p40-60, p60-80, p80-90, p90-100); Table E6 reports the median value of debt for households with any debt in the same income groups; and Table I1 reports the median pre-tax income in the same income groups. We compute the median debt-to-income ratio as the ratio of median debt to median income in each income group. Historical data are not available, so we construct values backward in time by assuming that all debt metrics follow the same historical trend as we observe in the Danish micro-data within each income group. For instance, to construct the share of euro area households in the lowest income group with any debt in 2010, we assume that this fraction grew at the same rate between 2010 (unobserved) and 2014 (observed) as in the Danish microdata (both values observed).

We construct weights that make the sample of Danish households match households in the United States within each year and income group, in terms of household debt. Let $A^i_{t,g}$ denote the fraction with any debt and $m^{US}_{t,g}$ denote the median debt-to-income ratio for those with positive debt, where g indicates the income group, t the year, and i either Denmark (DK) or the United States (US). For Danish households in income group g with no debt, we apply the weight $w_{t,g} = A^{US}_{t,g}/A^{DK}_{t,g}$. Further, we let $B^{US}_{t,g}$ and $B^{DK}_{t,g}$ denote the fraction of U.S. and Danish households, respectively, with positive debt and a debt-to-income ratio below the U.S. median $m^{US}_{t,g}$. For Danish households in income group g with positive debt and a debt-income ratio below the U.S. median, we apply the weight $w_{t,g} = B^{US}_{t,g}/B^{DK}_{t,g}$. Finally, we let $C^{US}_{t,g}$ and $C^{DK}_{t,g}$ denote the fraction of U.S. and Danish households, respectively, with positive debt and a debt-to-income ratio above the U.S. median $m^{US}_{t,g}$. For Danish households in income group g with positive debt and a debt-to-income ratio above the U.S. median, we apply the weight $w_{t,g} = C^{US}_{t,g}/C^{DK}_{t,g}$. Intuitively, the weights ensure that the sample of Danish households, within each income group and year, has the same share with no debt, the same share with positive debt below the U.S. median, and the same share with positive debt above the U.S. median as U.S. households. For instance, if there are 25% more Danish households with no debt than in the United States in a given income group at a given time, we apply a weight of 0.8 to these observations in our weighted regressions. We follow the same procedure to produce another set of weights that makes Danish households match households in the euro area.

Figure IA.19 illustrates the weights that match our sample to households in the United States on debt. In the early years, there are more low-income households with no debt in Denmark than in the United States (weight$<$1), but this pattern reverses over time (weight$>$1). At higher income levels, there are fewer households with no debt in Denmark than in the United States throughout the sample period. The difference is particularly pronounced at the top of the income distribution in the most recent years (weight ≈ 2). By contrast, there are generally more Danish households with high ratios of debt to income, notably at high income levels and in more recent years.

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