

# Economic inequality and macroeconomic imbalances

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## Income inequality and household saving

- Keynesians traditionally assume a positive link between personal inequality and the household saving rate because “the rich save more than the poor”
- With upward-looking status comparisons, there may be a negative link between personal inequality and the aggregate household saving rate (“expenditure cascades” model by Frank et al., 2010)
- Growing literature on link between rising income inequality and the decline in saving (and rise in household debt) prior to the Great Recession (e.g. Palley, 1994; Frank, 2006; Cynamon and Fazzari, 2014; Fitoussi and Stiglitz, 2009; Rajan, 2010; Kumhof and Rancière, 2010; Stockhammer, 2013; survey by van Treeck, 2014)

## The corporate veil: Functional income distribution and aggregate demand

- If households have a higher propensity to spend out of current income than firms, a falling wage share is linked to a decline in the consumption-to-GDP ratio and, possibly, a fall in aggregate demand
- Existence of a corporate veil, i.e., consumers react differently to a rise in dividends than to an increase in corporate retained earnings (e.g. Feldstein and Fane, 1973; Poterba, 1991; Baker et al., 2007; Atkinson, 2009)

## Hypothesis 1

- Rising personal inequality, especially at the top, leads to a decrease of household saving and the current account, *ceteris paribus*.

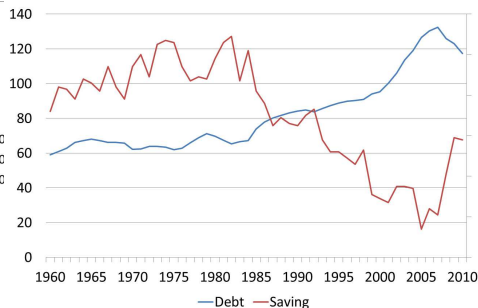
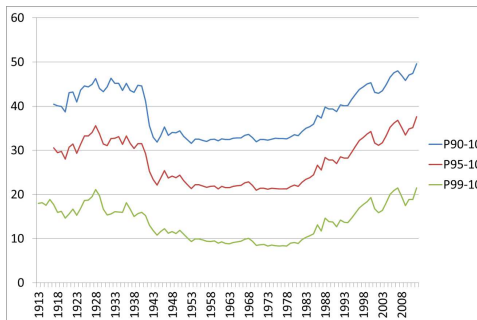
## Hypothesis 2

- A fall in the wage share or an increase in corporate net lending leads to an increase in the current account, *ceteris paribus*.

## Hypothesis 3

- The joint effects of changes in personal and functional income distribution contribute to a significant degree to the explanation of the global current account imbalances.

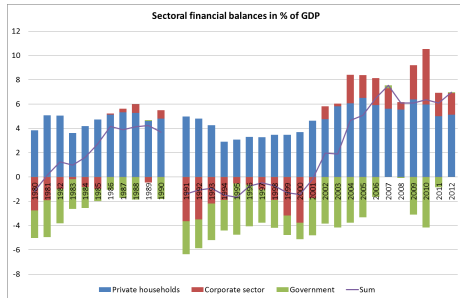
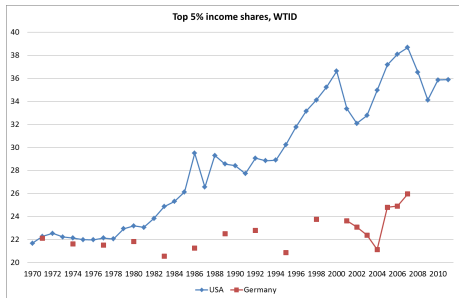
# Illustration - United States



Source: WTID, NIPA, Flow of Funds, own calculations

- Strong increase in top income shares, strong decrease in household saving rate and strong rise in household leverage.
- Little variation corporate financial balance, relatively small decrease in wage share.
- Shareholder value model favours high profit payouts.

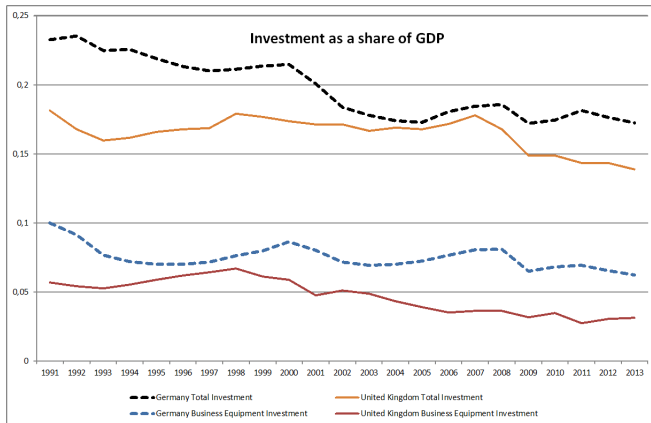
# Illustration - Germany



Source: AMECO Database, own calculations

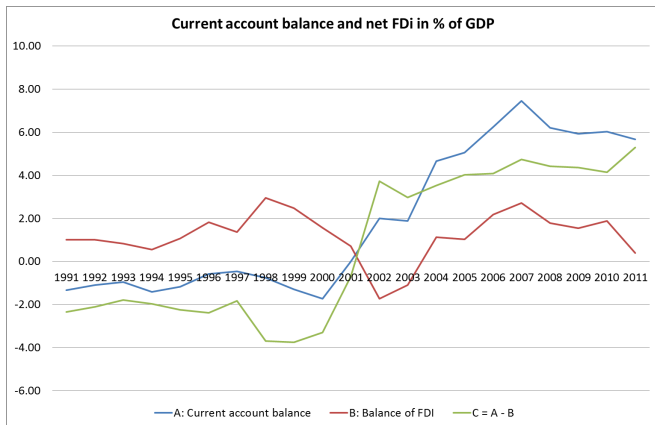
- Little variation in top income shares and household financial balance.
- Strong increase in corporate financial balance, strong decrease in private wage share.
- SME business model favours high profit retentions.

Germany's current account balance is not due to weakness of business equipment investment



Source: AMECO Database, own calculations

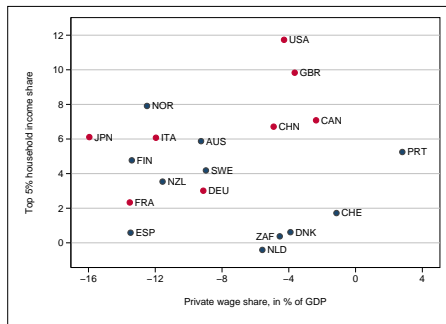
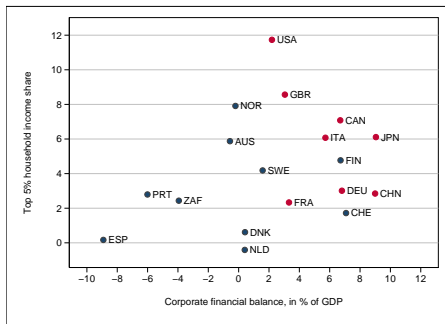
## Germany's current account balance is not driven by foreign direct investment



Source: AMECO Database, Deutsche Bundesbank, own calculations

# Illustration - Top income shares and functional income distribution

## Personal and functional income distribution, 1980/3-2004/7 (changes)

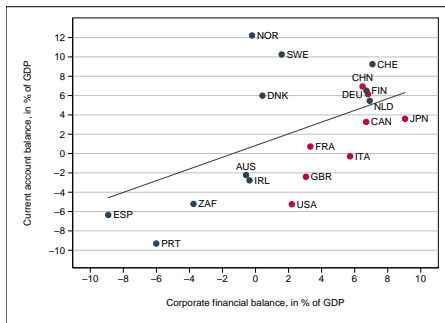


Source: The World Top Incomes Database and AMECO Database, own calculations

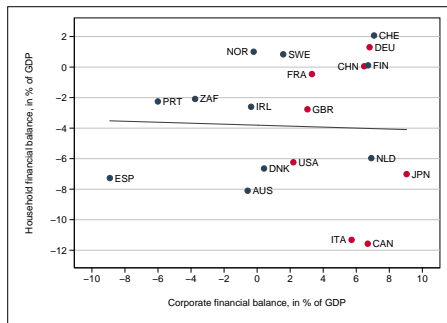


# Illustration - Sectoral financial balances

Current account and corporate financial balance, 1980/3-2004/7 (changes)



Household and corporate financial balance, 1980/3-2004/7 (changes)



Source: World Economic Outlook (OECD) and AMECO Database, own calculations

- Corporate financial balance is positively related to the current account
- No systematic relationship between corporate and household financial balance

We amend the approach developed by Kumhof et al. (2012) and estimate the following model

$$CA_{i,t} = \beta_0 + \beta_1 NFA_{i,t} + \beta_2 FISCALBAL_{i,t} + \beta_3 RelGDPpc_{i,t} + \beta_4 DEP_{i,t} \\ + \beta_5 POP_{i,t} + \beta_6 CREDIT_{i,t} + \beta_7 CORP_{i,t} + \beta_8 INEQ_{i,t} + \epsilon_{i,t} \quad (1)$$

- **Countries:** AUS, CAN, CHN, DNK, FIN, FRA, DEU, IRE, ITA, JPN, NLD, NZL, NOR, PRT, ZAF, ESP, SWE, CHE, GBR, USA
- **Sample period:** 1972-2007, four-year non-overlapping averages
- **Cross-sectional demeaning:**  $i$  indexes each country in the sample of  $J$  countries

$$\tilde{X}_{i,t} = X_{i,t} - \frac{\sum_{i=1}^J (GDP_{i,t} * X_{i,t})}{\sum_{i=1}^J GDP_{i,t}} \quad (2)$$

$$\tilde{X}_{i,t} = X_{i,t} - \frac{\sum_{i=1}^J ((EX + IM)_{i,t} * X_{i,t})}{\sum_{i=1}^J (EX + IM)_{i,t}} \quad (3)$$

- **Estimation approach:** Pooled OLS and FE estimations with robust standard errors
- **Robustness:** Estimations for the sample of G7/OECD countries, estimations with yearly data, household and corporate financial balance as dependent variable

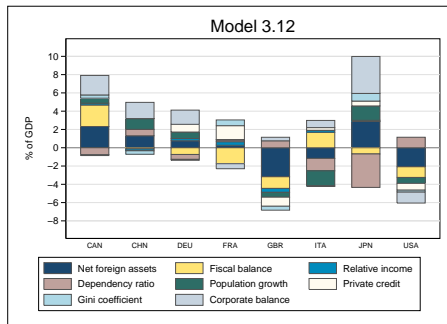
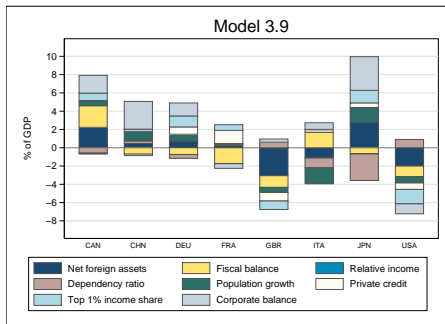
**Table: Estimation results for large sample, 1972-2007, Trade-weighted demeaning**

Regressor	(1)	(2)	(3)	(4)
Net foreign assets (% of GDP)	0.077*** (0.012)	0.073*** (0.012)	0.072*** (0.011)	0.080*** (0.011)
Fiscal balance (% of GDP)	0.411*** (0.105)	0.408*** (0.101)	0.485*** (0.096)	0.410*** (0.104)
Relative per capita income	0.010 (1.465)	-0.592 (1.370)	-1.556 (1.331)	-3.503** (1.592)
Old-age dependency ratio	-0.205*** (0.078)	-0.241*** (0.072)	-0.311*** (0.072)	-0.258*** (0.080)
Population growth	-3.193*** (0.750)	-3.153*** (0.767)	-4.032*** (0.710)	-3.062*** (0.731)
Private credit (% of GDP)	-0.021*** (0.007)	-0.016** (0.007)	-0.016** (0.006)	-0.022*** (0.007)
Corporate balance (% of GDP)	0.444*** (0.098)	0.487*** (0.094)	0.464*** (0.083)	0.486*** (0.086)
Personal income inequality	-0.317*** (0.093)	-0.266*** (0.059)	-0.224*** (0.050)	-0.133*** (0.047)
Constant	0.015 (1.198)	0.528 (1.098)	1.449 (1.077)	3.062** (1.285)
Adjusted $R^2$	0.653	0.673	0.720	0.647
Countries	20	20	20	20
Observations	121	119	118	125

Notes: Dependent variable is the current account balance in % of GDP. All regressions are estimated by POLS. Robust standard errors are reported in parantheses. \*, \*\* and \*\*\* denotes significance at 10%, 5% and 1% levels, respectively. The top 1%, 5%, 10% income share, Gini coefficient is used as measure of personal income inequality in Model (1)-(4), respectively.

# Estimation results: Contribution analysis

Estimation for large sample, 1980/3-2004/7, Trade-weighted demeaning



Source: see Appendix for a detailed description of the data, own calculations

- Large effects of corporate financial balance and top 1% income share
- Smaller effects of Gini coefficient

## Conclusion 1

- An increase in personal income inequality leads to a decrease of the current account, *ceteris paribus*

## Conclusion 2

- Consumers do not fully pierce the corporate veil
  - An increase in the corporate financial balance leads to an increase in the current account, *ceteris paribus*.

## Conclusion 3

- Excessive (retained) corporate profits, rather than weak (equipment) investment restrain domestic demand in Germany and contribute to macroeconomic instability at the European and international level.