



PERSONAL DISTRIBUTION IN POST-KEYNESIAN ECONOMICS

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OVERVIEW

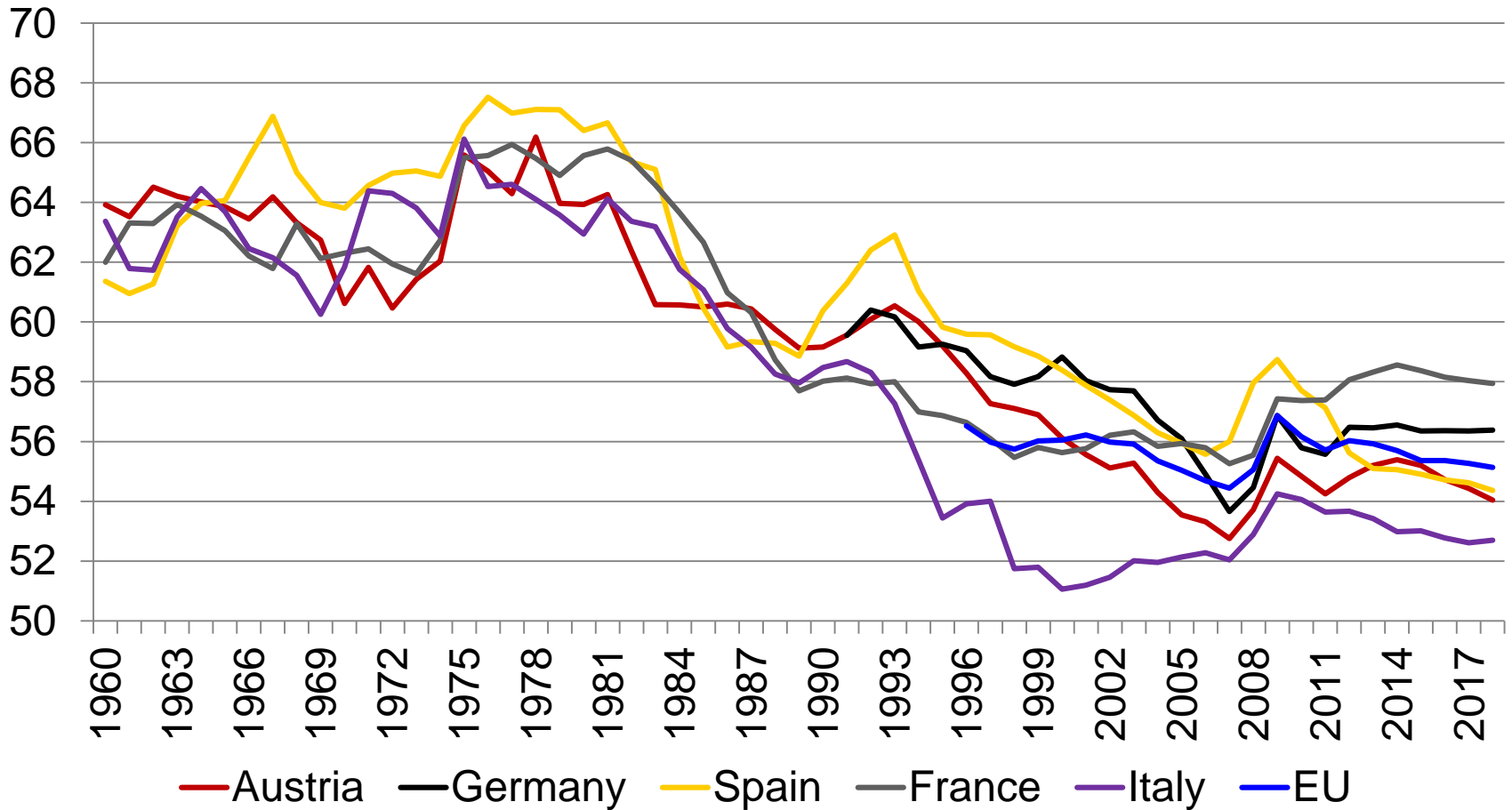
- Empirics
 - Functional income distribution
 - Personal income distribution
 - Wealth distribution
- Post-Keynesian Theory
 - Overhead costs
 - Wage-/ profit led
 - Expenditure cascades

EMPIRICS

FUNCTIONAL INCOME DISTRIBUTION

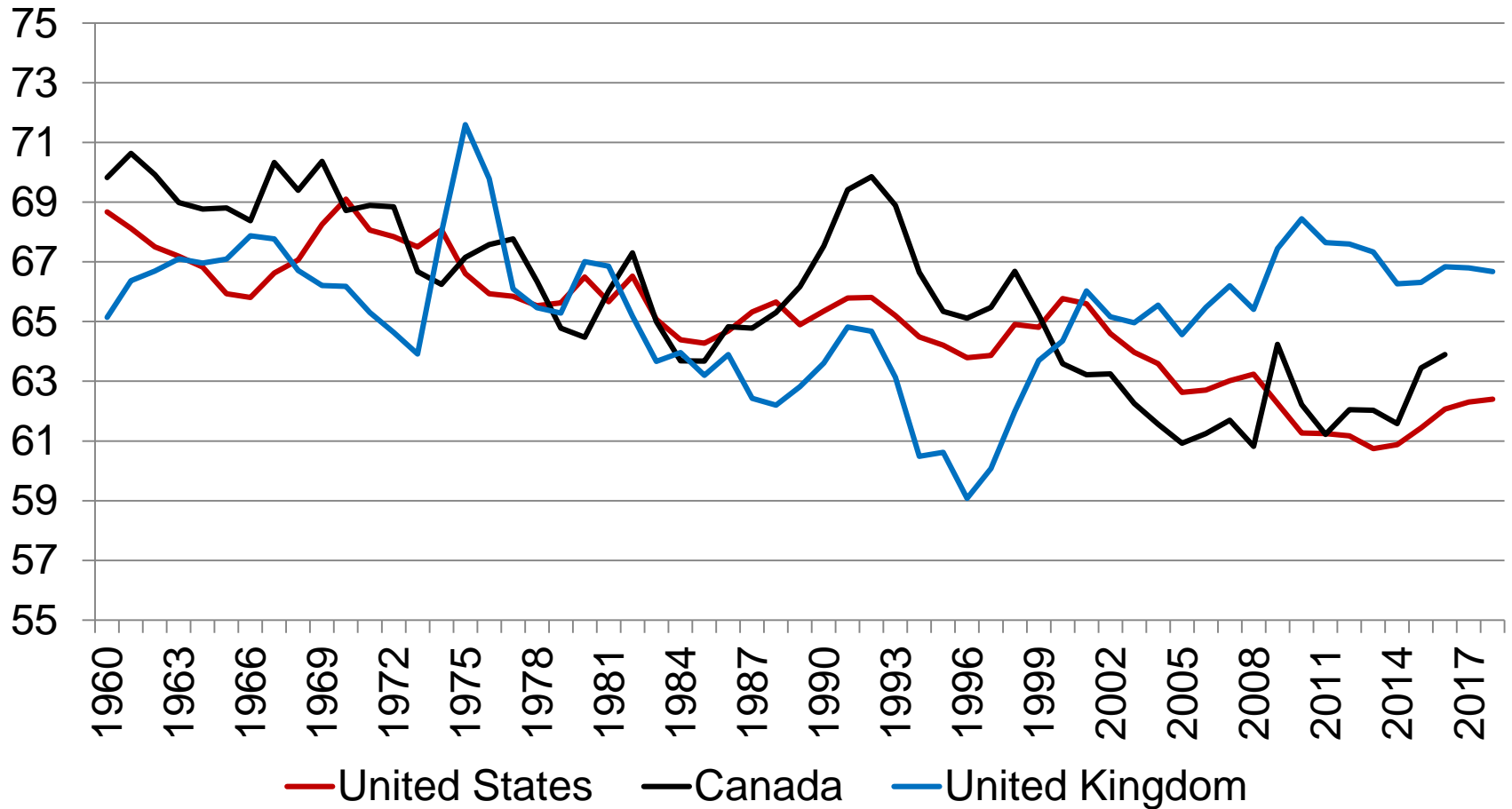
- **Thoroughly researched by Post-Keynesian economics (e.g. Stockhammer/Onaran 2008, Lavoie 2009, Onaran/Galanis 2012, Hein 2015 etc.)**
- **Secular falling trend in many countries, with cyclical elements**
- **Additional aspects:**
 - **export-led neo-mercantilist vs. debt-led consumption vs. domestic demand-led countries;**
 - **middle-income countries**
 - **managerial labour and overhead**
- **Contradicts Kaldor's 1st „remarkable historical consistency“,
Not a focus in much of neoclassical theory**

FUNCTIONAL INCOME DISTRIBUTION: ADJUSTED WAGE SHARE IN CONTINENTAL EUROPE



Source: European Commission, AMECO-DB

ADJUSTED WAGE SHARE IN ANGLOSAXON COUNTRIES



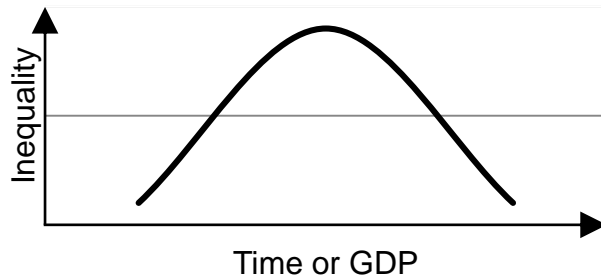
Source: European Commission, AMECO-DB

PERSONAL INCOME DISTRIBUTION

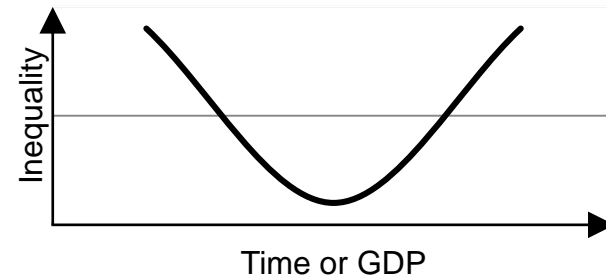
- **Recent surge in interest in mainstream economics**
- **Long-run inequality: u or wave?**
- **Income concentration at the top: rising?**
- **Income composition at the top: are classes still relevant?**

HISTORICAL PERSONAL INCOME INEQUALITY

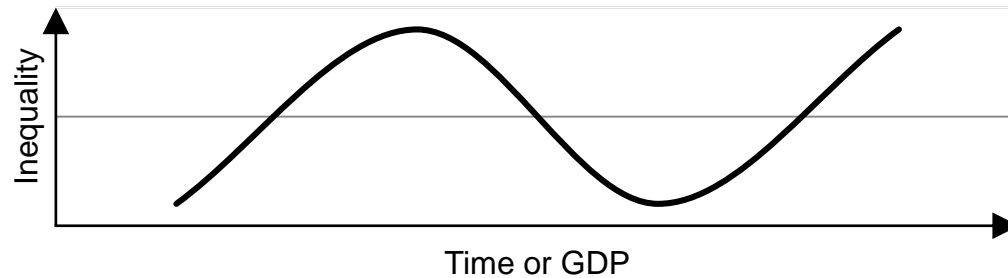
Kuznets



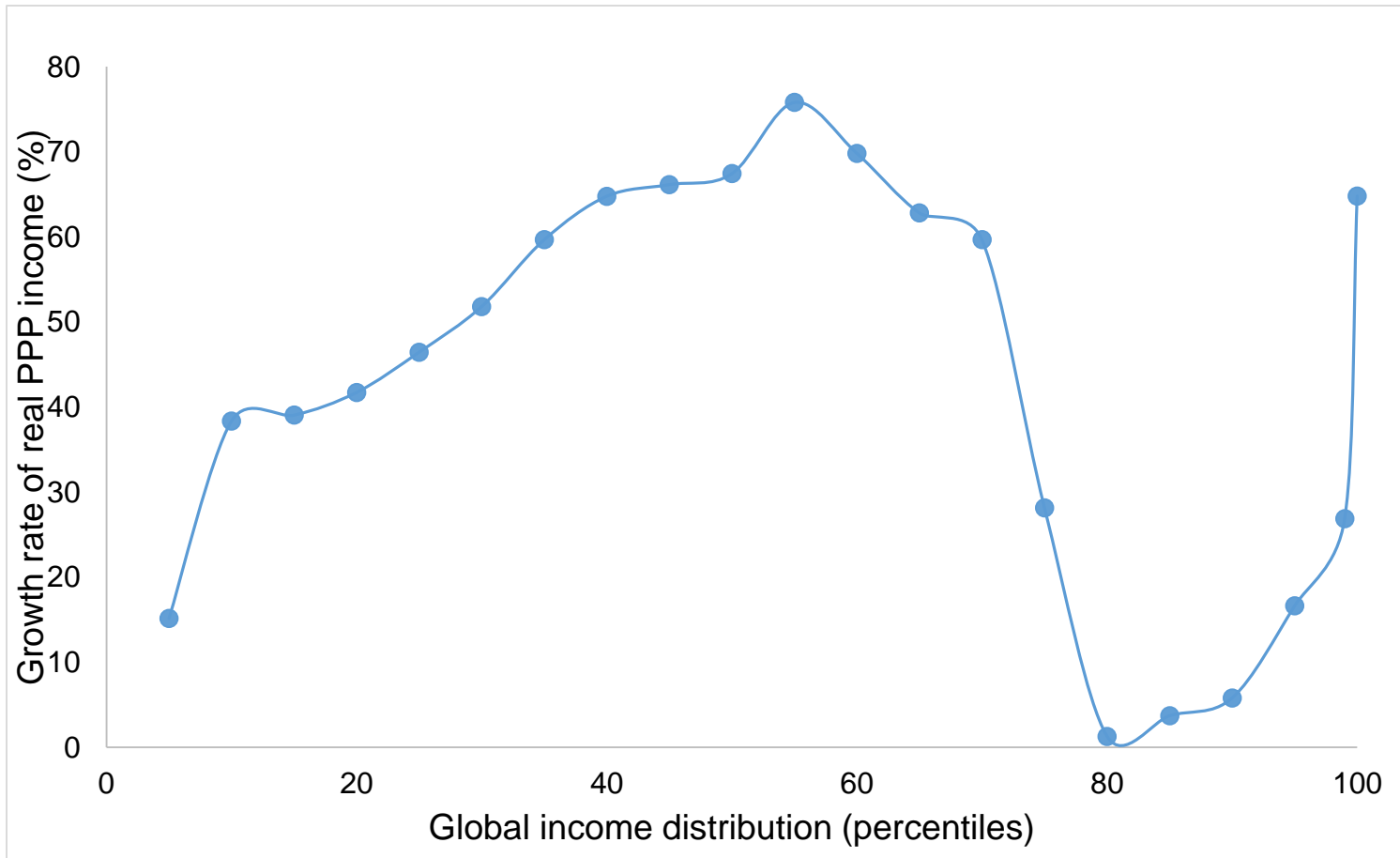
Piketty



Milanovic



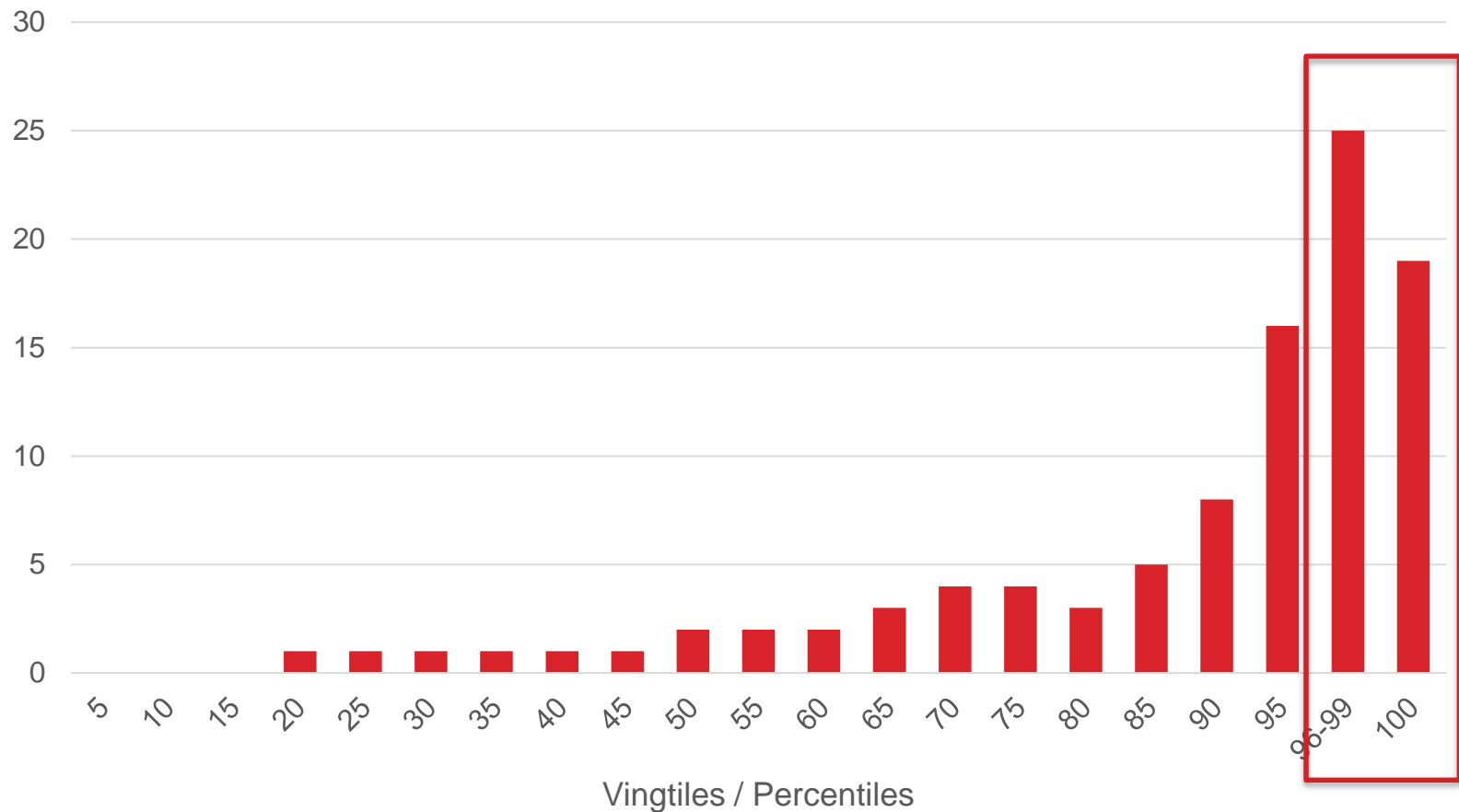
PERSONAL INCOME INEQUALITY: WITHIN- VS BETWEEN COUNTRIES



Quelle: Lakner, Milanovic (2016)

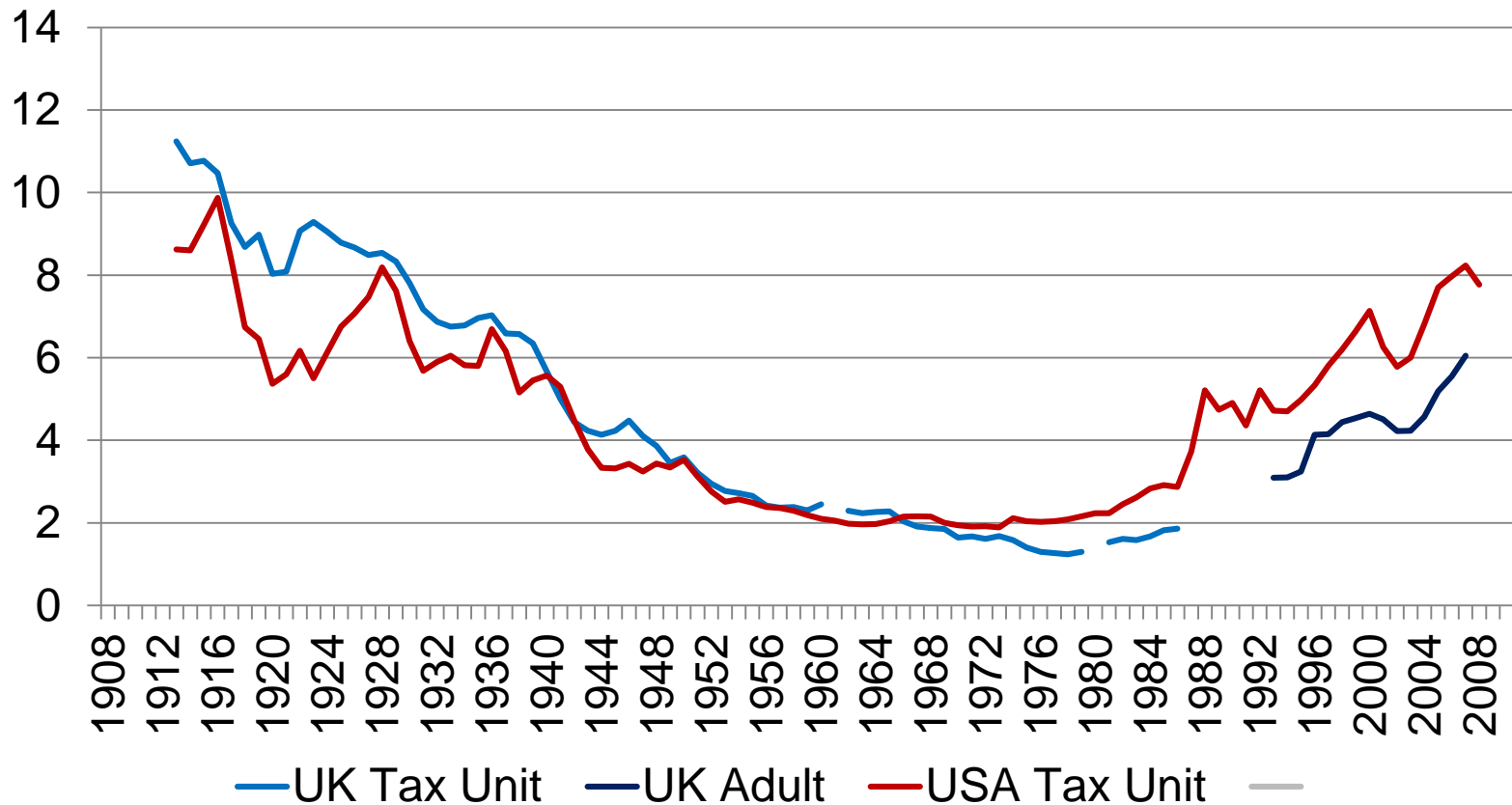
IS INEQUALITY ABOUT TO DECLINE?

DISTRIBUTION OF ABS. GLOBAL INCOME GAINS 1988-2008



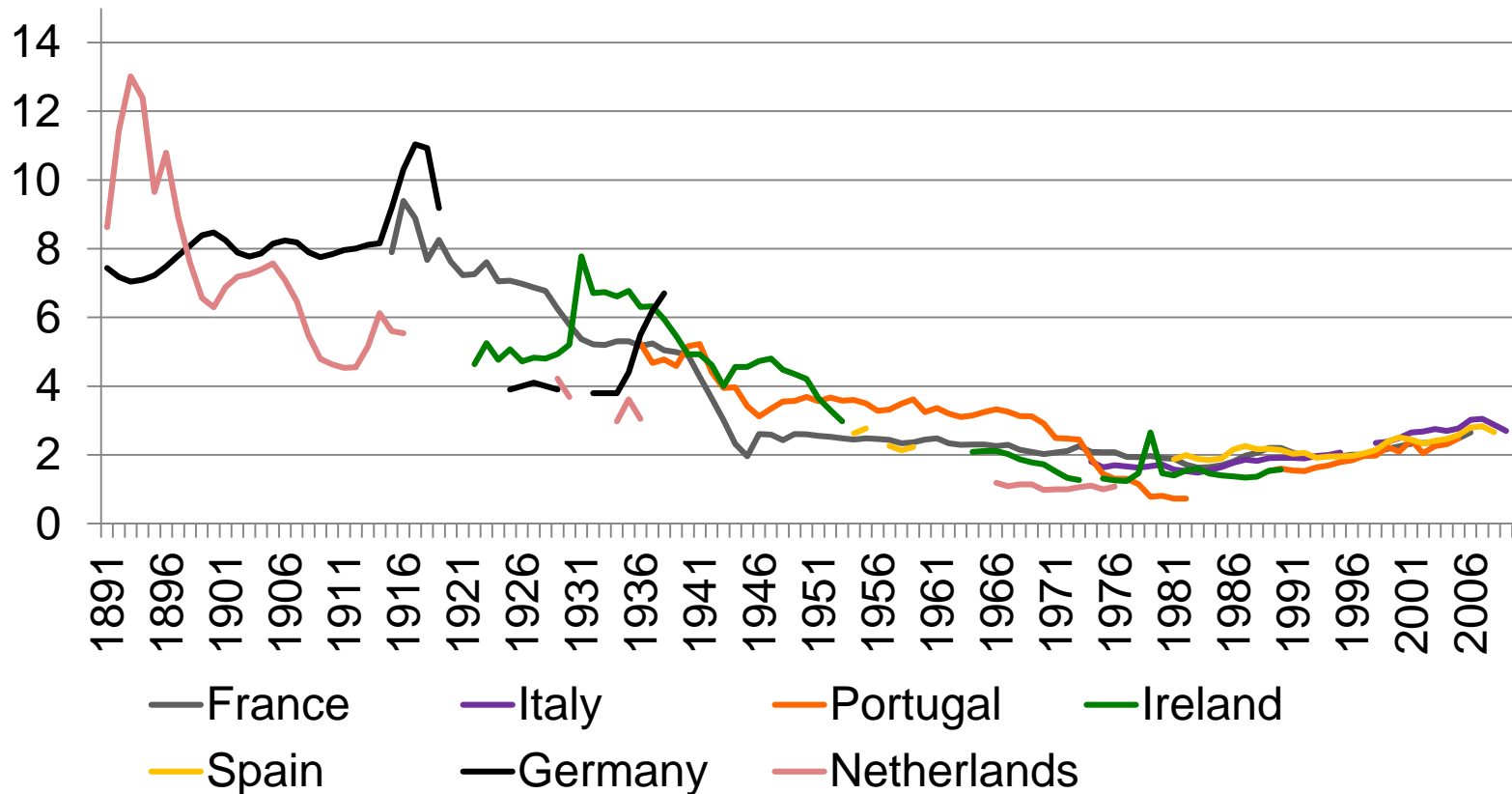
Source: Milanovic (2016)

PERSONAL INCOME DISTRIBUTION: TOP 1% SHARE IN NATIONAL INCOME (UK, US 1908-2008)



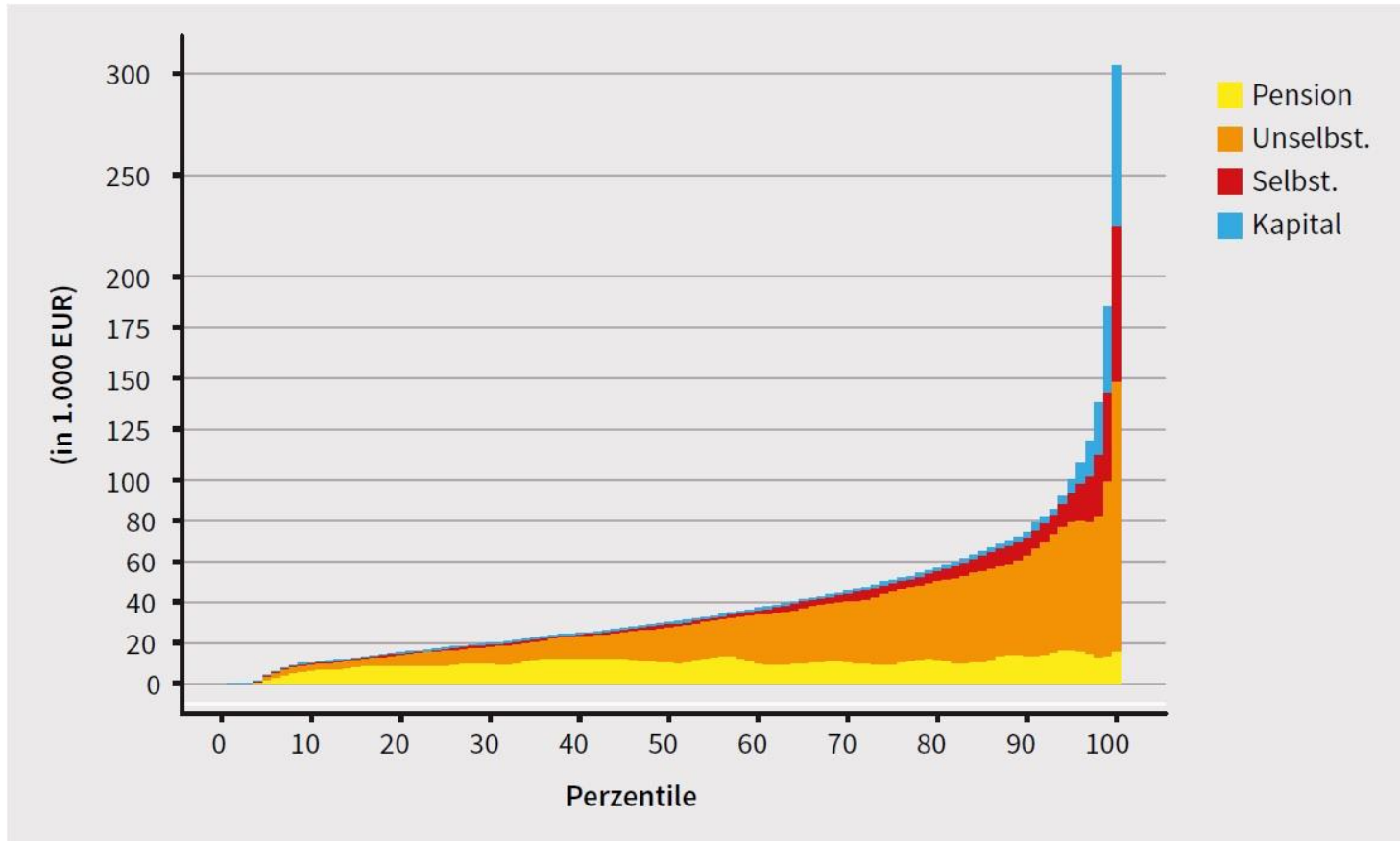
Source: WWID, Alvaredo et al. (2012)

TOP 1% SHARE IN NATIONAL INCOME, CONTINENTAL EUROPE 1891-2006



Source: WWID, Alvaredo et al. (2012)

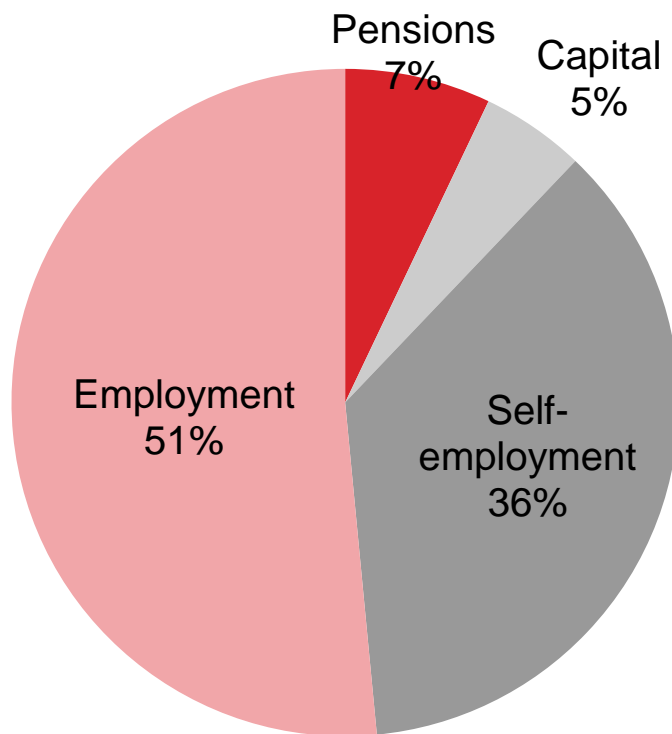
STRUCTURE OF HOUSEHOLD INCOME (AUSTRIA 2010)



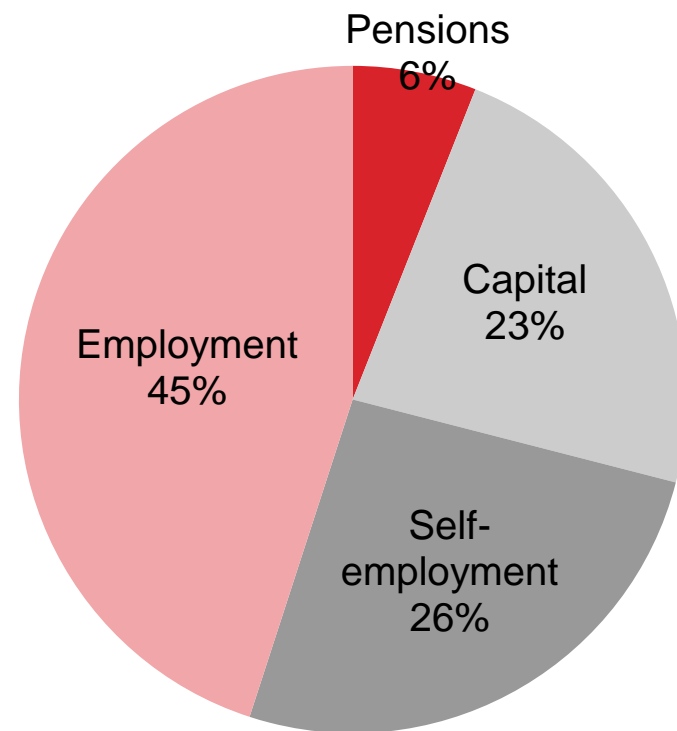
Source: HFCS 2010; Altzinger, Humer, Moser (2016)

FUNCTIONAL INCOME DISTRIBUTION BY INCOME LEVEL (AUSTRIA 2010)

Bottom 99%

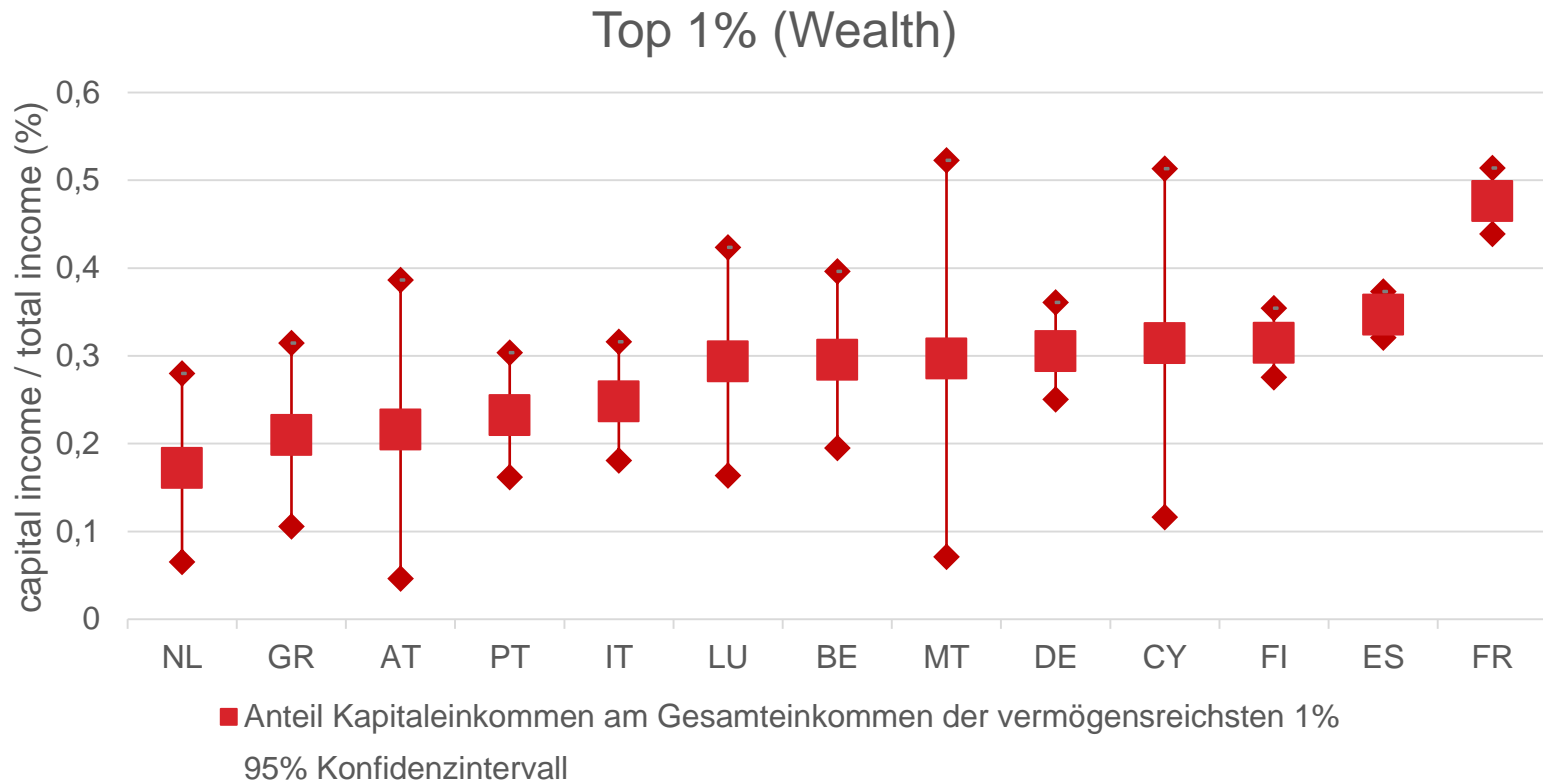


Top 1%



Source: HFCS 2010; Altzinger, Humer, Moser (2016)

FUNCTIONAL BY PERSONAL INCOME DISTRIBUTION: CAPITAL/TOTAL INCOME OF THE TOP 1% IN EUROPE



Source: HFCS 2010; calculations Miriam Rehm

WHAT IS THE ECONOMIC MAINSTREAM DOING?

- **DINA: Distributional National Accounts (OECD, Eurostat etc.)**
- **Initiated by Stiglitz-Sen-Fitoussi Commission, propelled by Piketty, Saez, Atkinson and their students**
- **Link personal-functional distribution in the SNA**

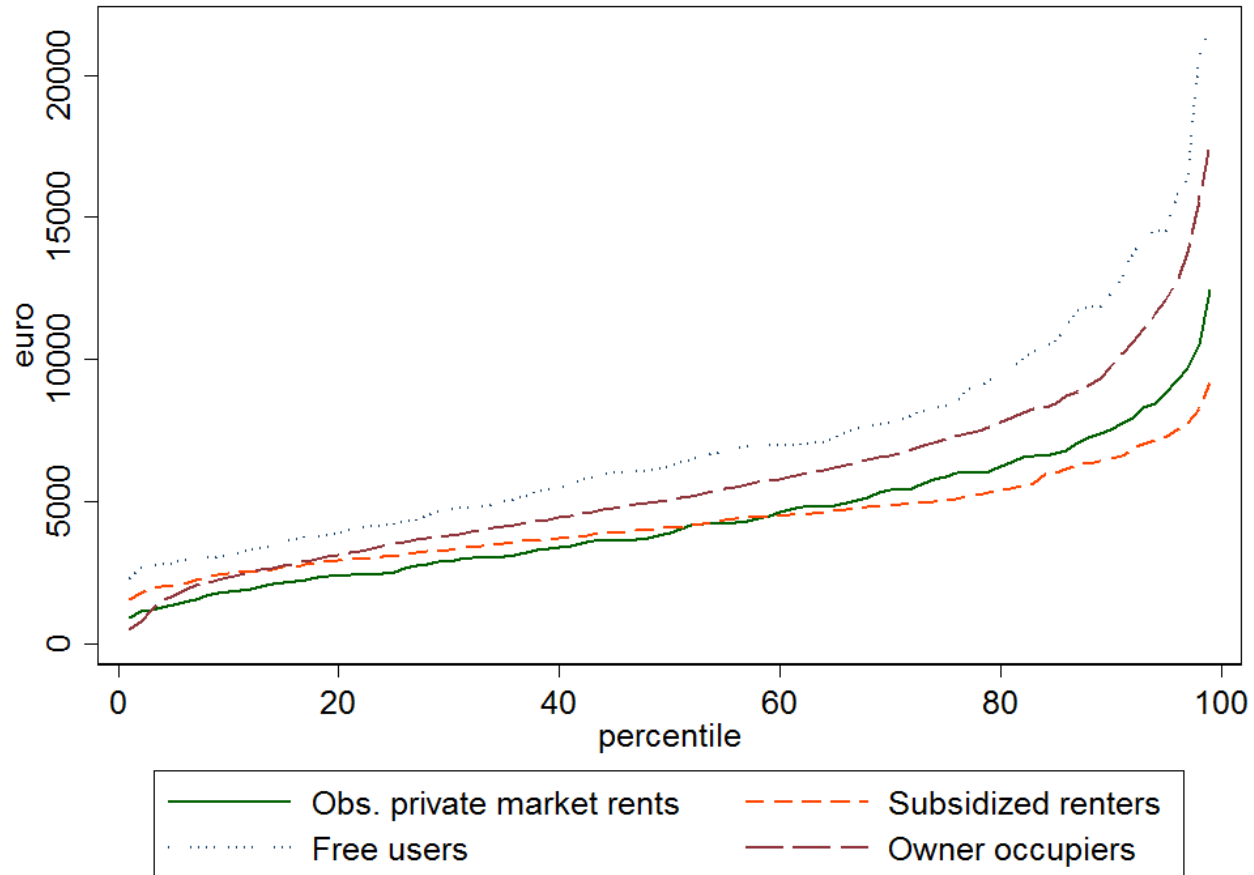
LINKS PERSONAL-FUNCTIONAL DISTRIBUTION

- **Imputations from micro data in SNA**
- **Classes**
- **Saving rates**

SYSTEM OF NATIONAL ACCOUNTS (SNA) AND DISTRIBUTION: IMPUTED RENTS

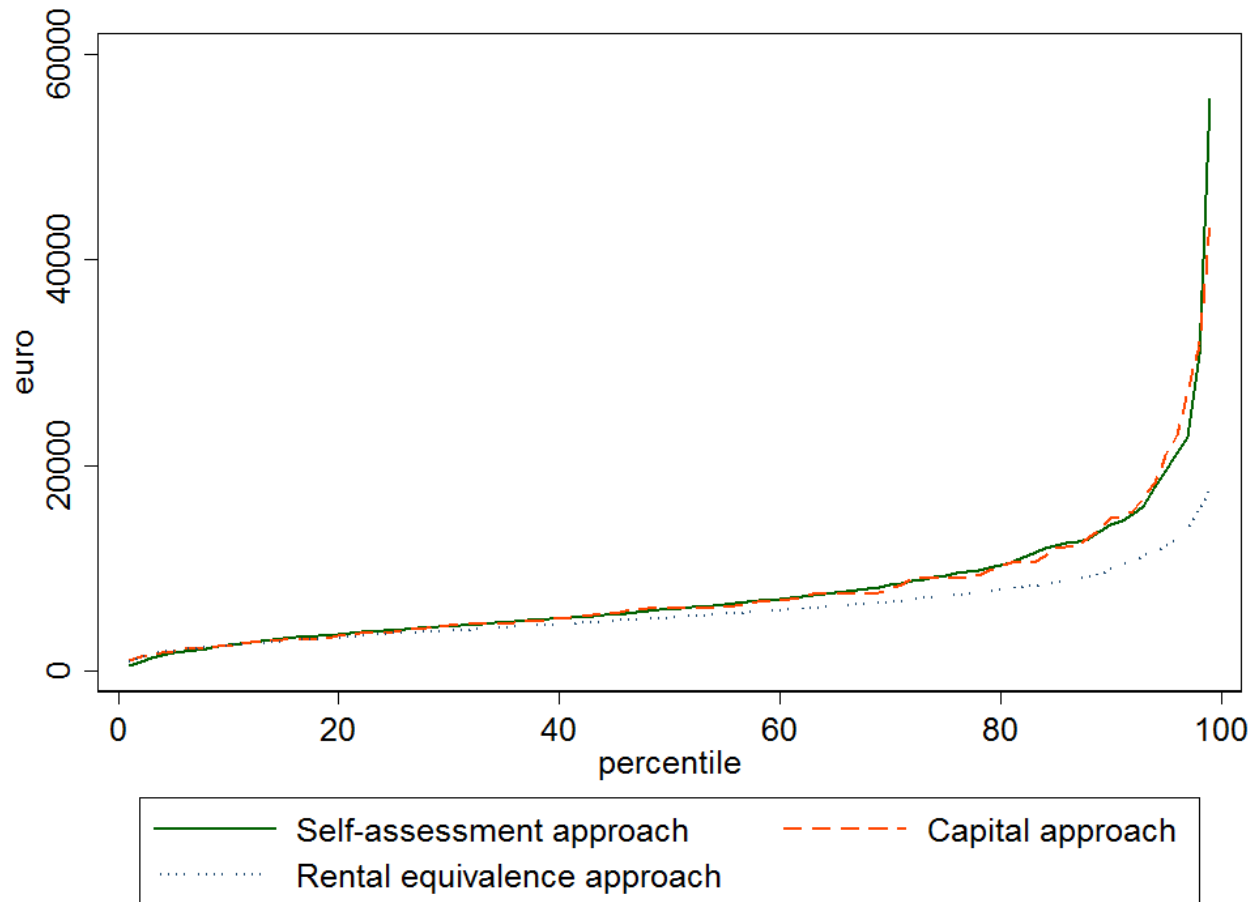
- **Imputed rents = non-cash income from owner-occupied housing („non-paid“ rents)**
- **Largest item imputed from micro data in SNA**
- **3 Methods:**
 - **Rental equivalence (hedonic regressions) – standard approach**
 - **Capital approach**
 - **Self-assessment**

IMPUTED RENTS BY GROSS INCOME (AUSTRIA)



Source: HFCS 2010; Fessler, Rehm, Tockner (2015)

IMPUTED RENTS MORE EQUAL WITH COMMON SNA APPROACH (AUSTRIA, 2010)



Source: HFCS 2010; Fessler, Rehm, Tockner (2015)

CLASSES

- **Does the functional distribution still describe society well?**
 - **Managers (employees like capitalists)**
 - **Contingent workers (self-employed like workers)**
- **7 classes:**
 - **3 capitalist**
 - **Self-employed**
 - **3 workers**

INCOME DISTRIBUTION BY CLASS

	Wages	Profits	Interest
The 1%	1.3	14.3	25.7
Rentiers	0.9	6.1	39.0
Industrialists	0.4	8.9	0.8
Self-employed	0.2	7.2	1.1
High-skilled empl.	1.5	0.4	0.6
Medium-skilled empl.	1.0	0.2	0.4
Low-skilled empl.	0.7	0.1	0.1

Source: HFCS 2010; Fessler, Rehm, Tockner (2015)

WEALTH DISTRIBUTION BY CLASS

	Safe assets	Risky financial	Safe fi. assets
The 1%	18.7	18.8	44.2
Rentiers	3.4	6.8	7.1
Industrialists	2.5	1.7	0.7
Self-employed	1.6	1.1	0.8
High-skilled empl.	1.0	1.3	1.1
Medium-skilled empl.	0.6	0.7	0.3
Low-skilled empl.	0.5	0.3	0.2

Source: HFCS 2010; Fessler, Rehm, Tockner (2015)

DEBT DISTRIBUTION BY CLASS

	Mortgages	Unsecured debt
The 1%	4.3	5.8
Rentiers	3.4	2.0
Industrialists	1.3	2.2
Self-employed	1.4	1.7
High-skilled empl.	1.5	1.3
Medium-skilled empl.	0.8	0.8
Low-skilled empl.	0.5	0.6

Source: HFCS 2010; Fessler, Rehm, Tockner (2015)

SAVING RATES

- **Differential saving rates (by income): core Post-Keynesian assumption**
- **Empirically (at least) 3 ways:**
 - **Savings out of profits are (relatively) higher than savings out of work income** ?
 - **Savings of capitalists are (relatively) higher than of workers,** ?
if the former receive mainly profit income and the latter mainly work income ✓
 - **Savings from high incomes are (relatively) higher than from low incomes,** ✓
if high incomes have a larger share of profit income and lower incomes have a higher share of work income ✓

SAVING RATES

- **Macrodata with some distributional information (standard calculation):**

$$s_{decile} = \frac{\sum_1^n C_{decile}}{\sum_1^n Y_{decile}}$$

- **Properties:**

- Upward sloping
- Bottom 40-60% have negative saving rates

- **Macroeconomic stability?**

- **Microdata:**

$$s_{decile} = \frac{\sum_1^n \frac{C_{household}}{Y_{household}}}{n}$$

- Bottom 20% have negative saving rates

SAVING RATE FROM MACRO DATA (AUSTRIA)



Source: Konsumerhebung 2009/10, calculations Miriam Rehm

WEALTH DISTRIBUTION

- **Until recently no standard definition**
- **Much worse data quality compared to income**
- **Much more unequal than income distribution**
- **Yet, conceptually crucial**

DATA SOURCES FOR WEALTH

- **Tax data (e.g. wealth taxes, inheritance taxes)**
 - Advantages: Often long time horizons, broad coverage
 - Disadvantages: Tax base and deductibles, tax avoidance and evasion
- **Surveys (e.g. SCF for US, HFCS for EU)**
 - Advantages: Socioeconomic information
 - Disadvantages: Voluntary participation, underreporting

WEALTH: DEFINITION

Non-financial (real) assets	Liabilities
Owner-occupied housing, other real estate	Mortgages
Consumer durables	Other investment loans
Vehicles	Consumer durable loans
Intellectual property	Education loans
Financial assets	
Currency and deposits	
Bonds and other debt securities	
Equity in own unincorporated enterprises	
Shares	
Mutual funds and other investment funds	
Pension funds	

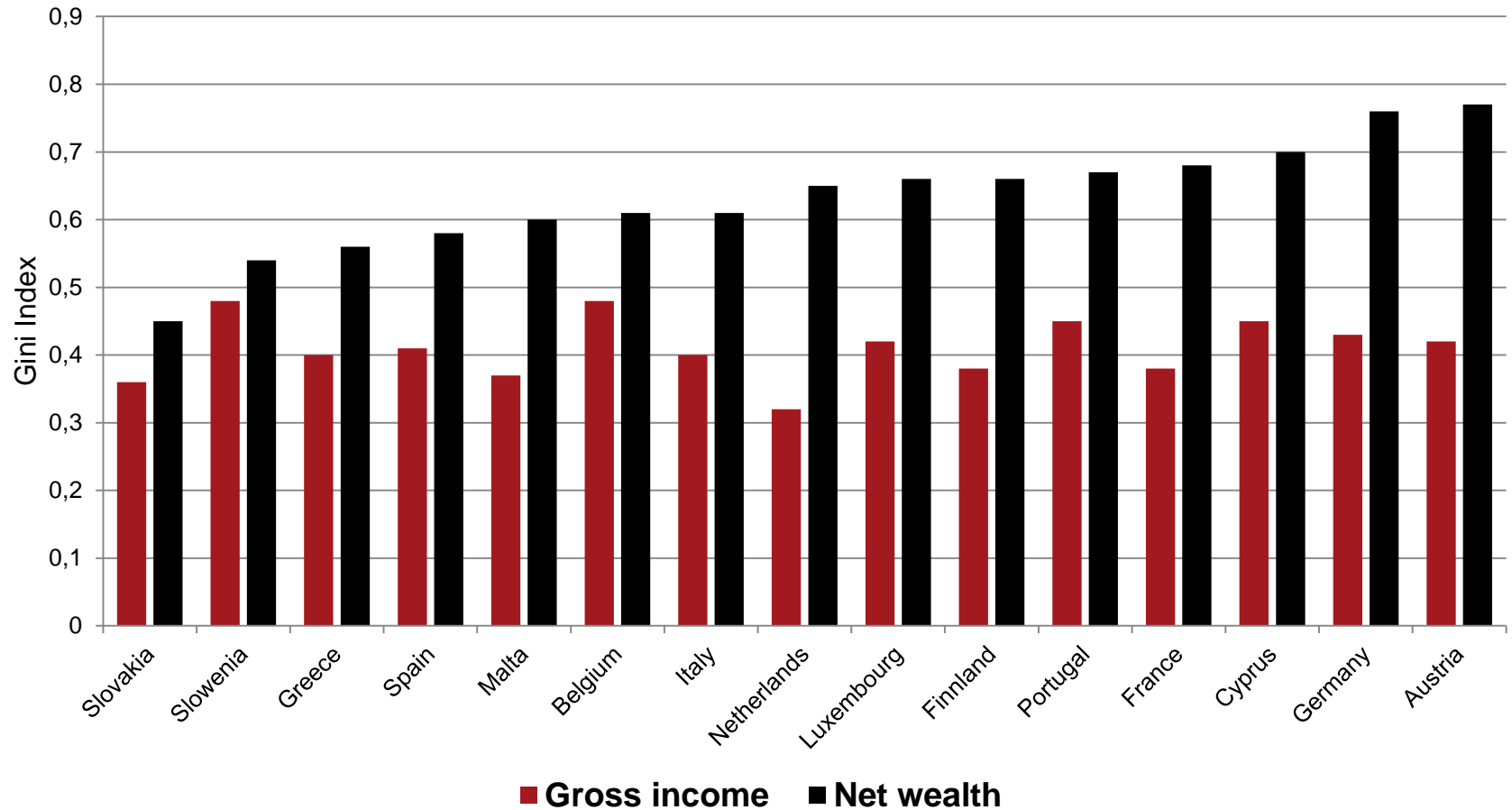
Source: OECD (2013)

PARTICIPATION IN ASSET CLASSES IN EUROPE

	Bottom half < 50%	Affluent 51-95%	Wealthy 96-100%
Vehicles	62	85	91
Main residence	28	92	94
Other valuables	37	51	62
Other real estate	8	35	78
Self-employment business	7	14	50
Current accounts	92	97	99
Savings accounts	57	63	67
Money owed to the household	9	6	10
Bonds	2	8	20
Shares	4	14	35
Mutual funds	6	16	32
Other financial assets	2	2	8

Source: HFCS 2010, calculations Miriam Rehm

WEALTH DISTRIBUTION: INEQUALITY IN THE EURO AREA



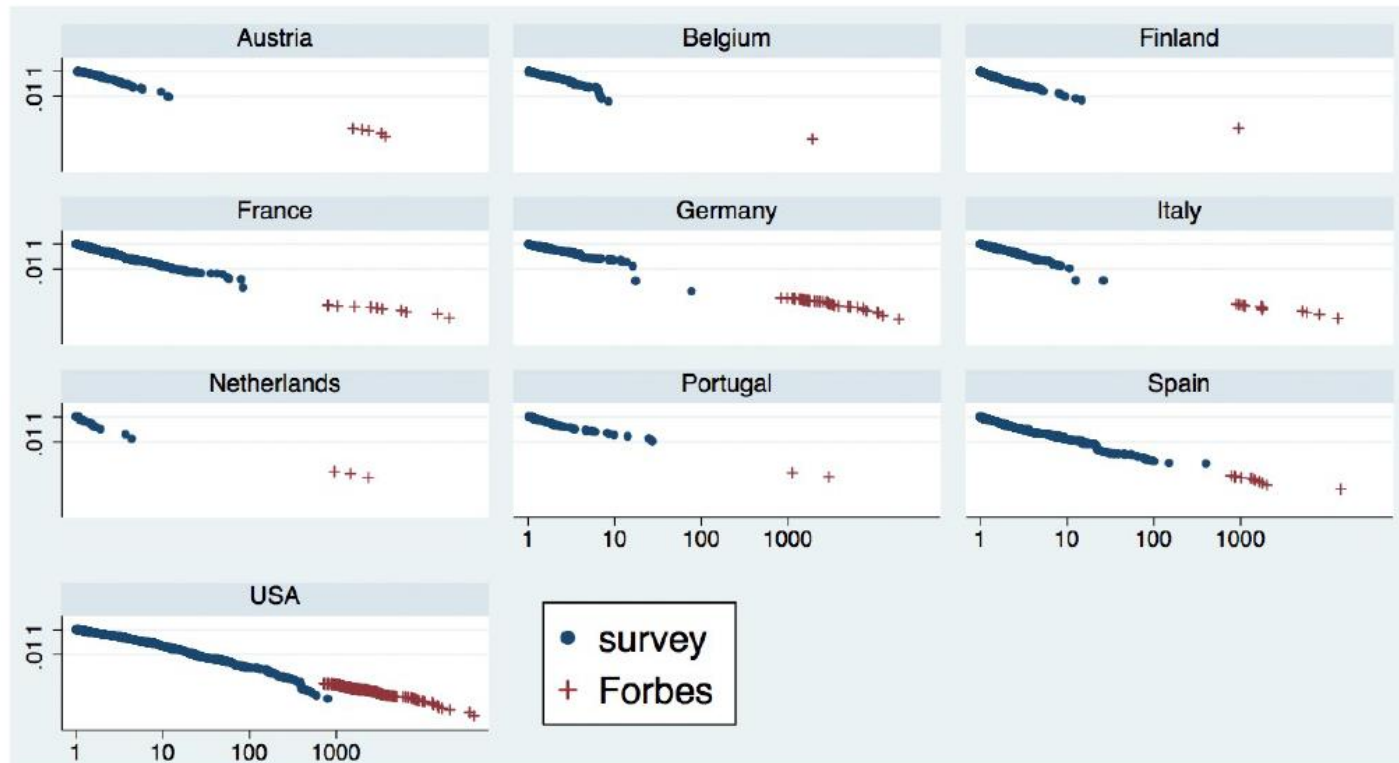
Source: HFCS 2010; Sierminska and Medgyesi 2013; Holzner, Jestl, Leitner 2015

UNDER-REPORTING OF TOP WEALTH (HFCS)

Mio. Euro	Max. wealth HFCS 2010	Min. wealth Forbes list
Germany	76	818
France	153	810
Italy	26	893
Spain	409	780
Netherlands	5	958
Belgium	8	1.920
Portugal	27	1.110
Austria	22	1.560
Finnland	15	958
USA (SCF)	806	737

Source: Vermeulen 2014

UNDER-REPORTING OF TOP WEALTH IN THE HFCS



Source: Vermeulen (2014)

THEORY

MANAGER PAY & OVERHEAD COSTS

- **Managers' salaries are wages by accounting standards**
- **Conceptually, are they profit/capital income?**
- **Important for the definition of costs: variable or fixed?**

OVERHEAD LABOUR (PALLEY 2005, LAVOIE 2009)

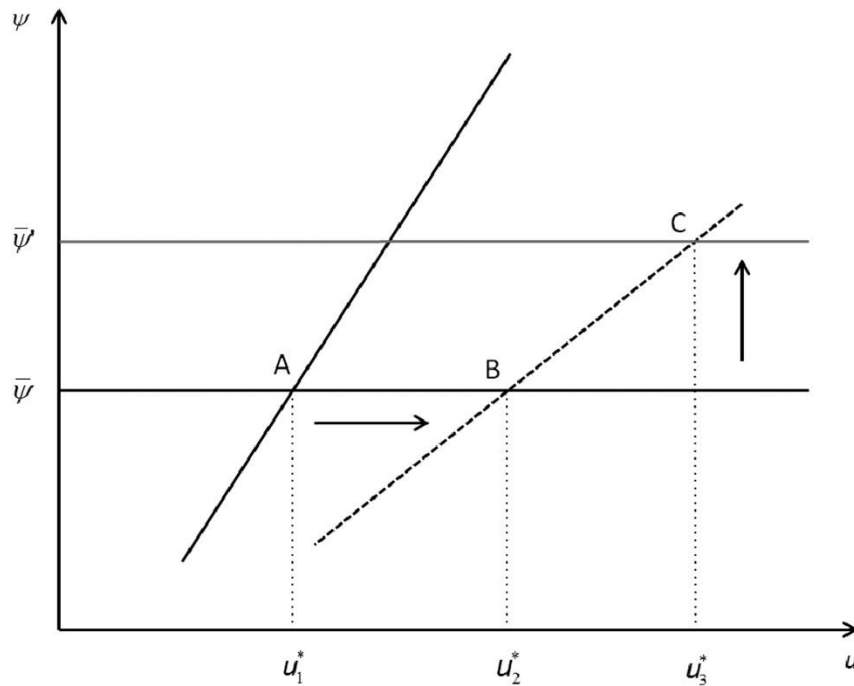
- **Wages and salaries: split between workers (variable costs) and managers (overhead costs)**
- **Ratio of wages depends endogenously on the capacity utilization (Lavoie 2009)**
- **Increase in overhead costs:**
 - **Target return pricing (firms have a target profit rate (based on total unit costs), and will thus raise prices when costs rise)**
 - **Wage share of workers will fall, wage share of managers will rise**
 - **Profit share depends on capacity utilization and autonomous investment**

WAGE-/PROFIT-LED (CARVALHO/REZAI 2016)

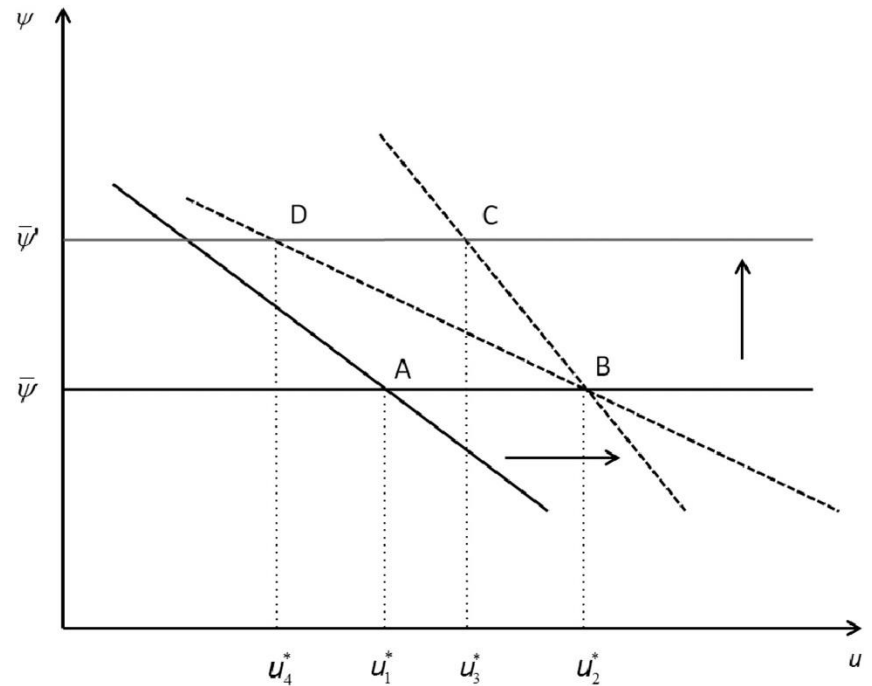
- **Redistribution towards workers through lower wage inequality**
- **Direct effect: Lower saving out of wages => higher differential between saving out of wages and profits => more wage-led**
- **Indirect effect: Via the demand regime (wage- or profit-led):**
 - **Wage-led and weakly profit-led => more wage-led**
 - **Strongly profit-led => more profit-led**

W/P-LED: REDUCTION IN PERSONAL INCOME INEQU.

Wage-led



Profit-led



Source: Carvalho und Rezai (2016)

WAGE-/PROFIT LED (PRANTE 2017)

- Saving rate dependent on wage inequality
- Parameter η : demand and supply-side factors impacting the savings rate (interpreted as indebtedness)
- $\eta > 0$: wage inequality rises \rightarrow propensity to save falls (expansionary)
 $\eta < 0$: contractionary
- Combined with wage-/profit led: may overcompensate effect of changes in the functional distribution of income

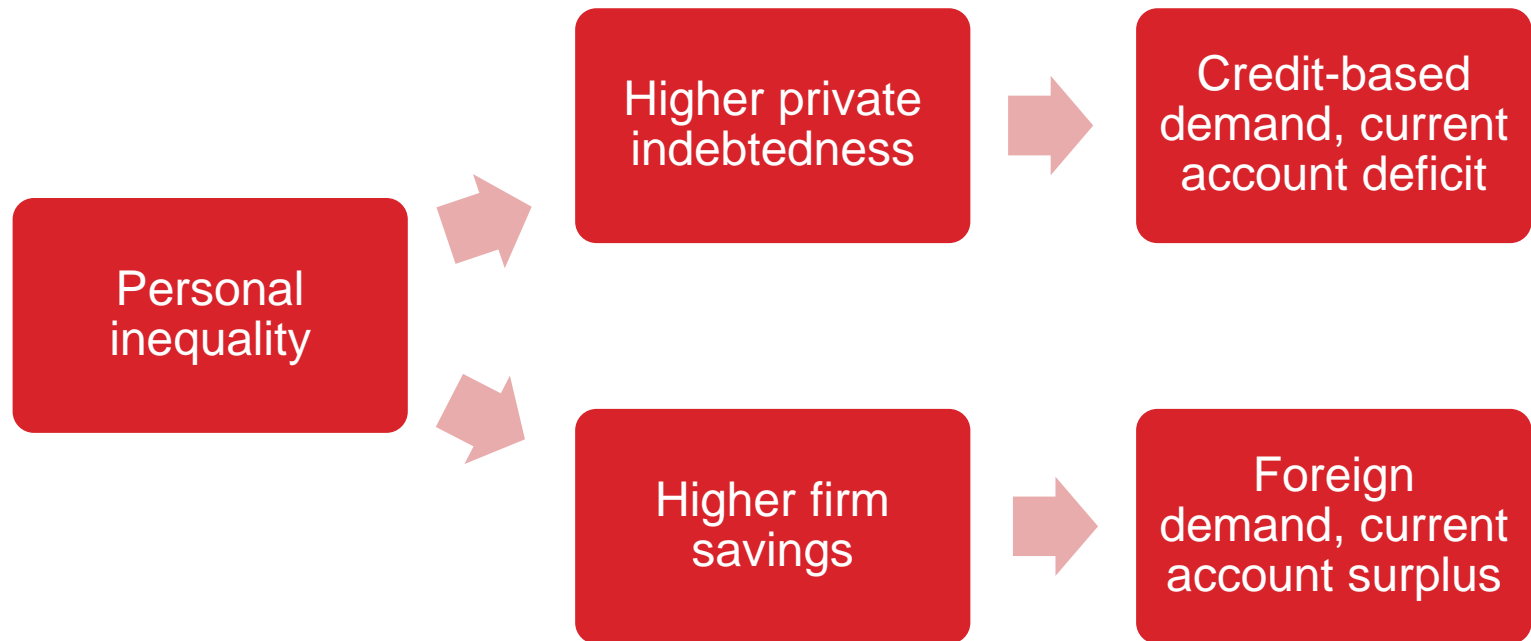
WAGE-/PROFIT LED (PALLEY 2017)

- **Generalizes Carvalho/Rezai:
Capitalists-managers and workers-capital owners
Both groups receive wages, save, own capital, and receive profits)**
- **Redistribution to workers (wage share or ownership) raises capacity utilization, due to lower aggregate saving**
- **Increasing workers' ownership of capital => more profit-led (workers receive + spend a greater share of profits, enhancing profits' effect on capacity utilization)**
- **Increasing workers' share of the wage bill makes the economy more wage-led (workers receive + spend a greater share of wage, enhancing their effect on u)**

WAGE-/PROFIT LED (PALLEY 2017) (2)

- **Redistribution can change regime from wage- to profit-led:**
 - **Larger differences in savings rates**
 - **Weaker reaction of investment to profitability**
 - **Larger economy**
 - **Redistribution to workers' income**

EXPORT- VS. DEBT-BASED GROWTH REGIME



Source: Adapted from Behringer, Theobald, vanTreeck 2016

EXPENDITURE CASCADES (BEHRINGER, THEOBALD, VAN TREECK 2016, KAPPELLER, SCHÜTZ 2015)



- Higher consumption of higher incomes (because inequality is increasing)
- Relative income hypothesis:
Households beneath want to keep up => indebtedness
- Inverts the effect of inequality on consumption (positive!)

WEALTH INEQUALITY (ONARAN EA. 2011, STOCKHAMMER, WILDAUER 2015)

- Empirically tests expenditure cascades, but also incorporates wealth in wage-/profit led model
- Distinction between financial wealth and residential investment (determined like consumption expenditures)
- No empirical support for an effect of personal inequality on consumption and investment
- But aspects of the wealth distribution do have an effect

CONCLUSION

- **Post-Keynesians have quite a headstart on the mainstream in linking the functional and the personal income distribution**
 - **3 broad model groups: standard PKE model including overhead labour, wage-/profit led model with personal income inequality, expenditure cascades**
- **Yet, the personal income distribution is under-researched compared to the functional distribution in PKE**
 - **Empirically, both have been becoming more unequal / unfavourable to workers**
- **The wealth distribution has received even less attention**
 - **It is key both theoretically (foundation of classes) and**
 - **Empirically much more unequal than the income distribution**