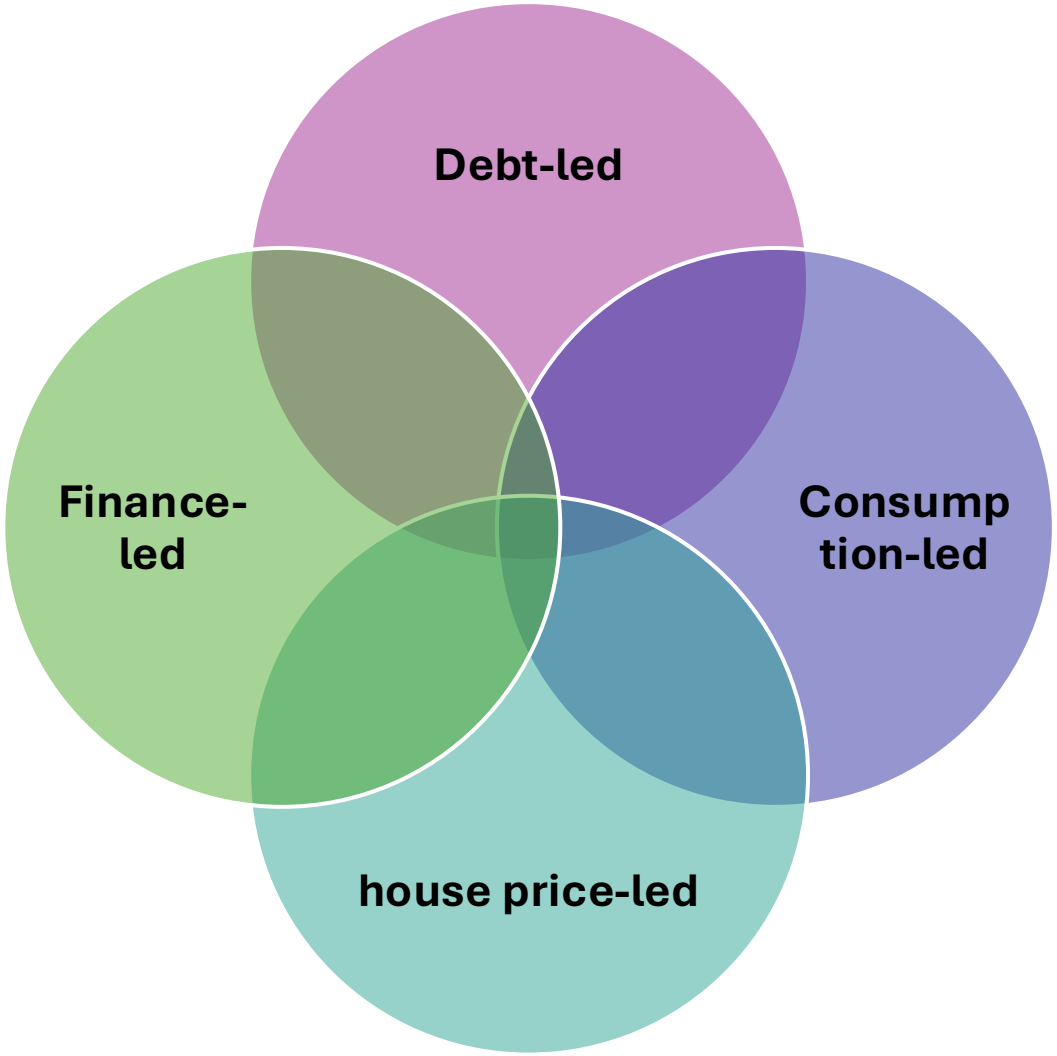
House price-led growth. Reflections on finance-led growth models

Engelbert Stockhammer

King's College London

Aim of the paper



- Different terms in the literature
- What's the difference?
  - Clarify growth mechanism
  - Country classification
- Assessment

- HP-led growth as the most relevant form of finance-led growth
- Stylized features of HP-led growth as the most relevant form of finance-led growth

- Clarification: this paper is more about growth processes than about growth models

Consumption-led growth?

- Baccaro and Pontusson (2016 and later): consumption-led GM
  - Mention debt, vague on what the cause of consumption growth is
  - What sort of debt? Consumer credit or mortgages?
- Aim: country classification
- Consumption is always the largest GDP component
- Consumption can rise for different reasons
  - a wage-led growth model may well be ‘consumption led’
  - WS ↑ → C ↑ but I↓ → higher relative growth contribution of C
- *Absolute* growth contributions of consumption have declined
- Limited usefulness, both re country classification and mechanism

relative contributions of demand components to GDP growth by country group and policy regime

Country group	Regime	Nº of growth episodes	Median annual GDP growth	Median relative contributions to GDP growth from:			
				Private consumption	Investment	Net exports	Public consumption
Anglo-Saxon	Fordism	6	100%	57 .3%	22.3%	2.7.%	17.0%
	Neoliberalism	8	100%	62.3%	27.2%	-6.4%	14.4%
	Post-GFC	4	100%	64.7%	38.3%	-5.6%	7.4%
W Europe	Fordism	7	100%	60.0%	21.8%	0.9%	17.0%
	Neoliberalism	11	100%	50.3%	23.0%	10.8%	17.1%
	Post-GFC	7	100%	39.3%	40.5%	10.5%	14.0%

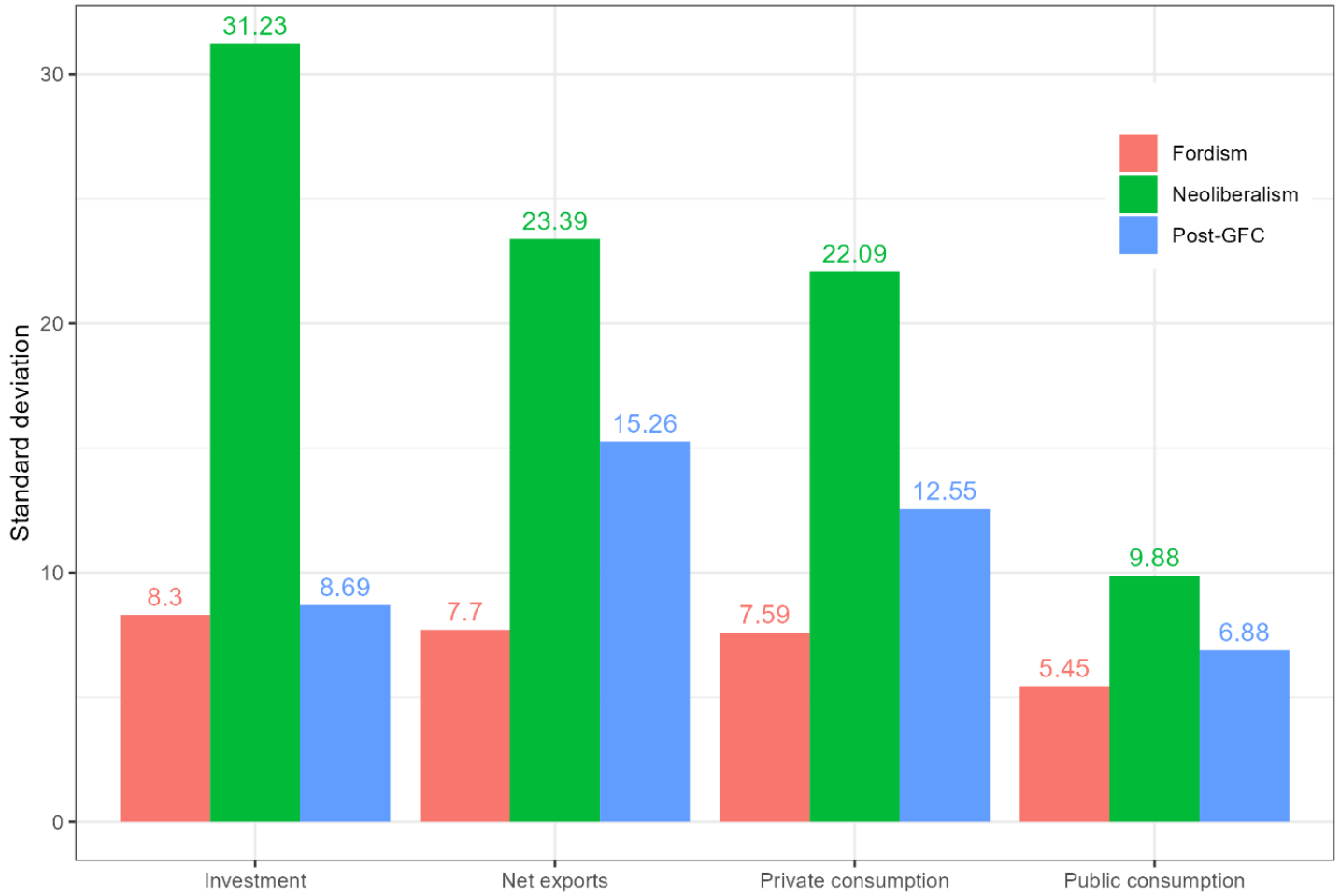
absolute contributions of demand components to GDP growth by country group and policy regime

Country group	Regime	Nº of growth episodes	Median annual GDP growth	Median contributions to GDP growth from:			
				Private consumption	Investment	Net exports	Public consumption
Anglo-Saxon	Fordism	6	3.6%	2.18%	0.89%	0.1%	0.65%
	Neoliberalism	8	2.8%	1.88%	0.76%	-0.18%	0.36%
	Post-GFC	4	2.1%	1.4%	0.83%	-0.13%	0.25%
Western Europe	Fordism	7	4.1%	2.45%	0.76%	0.05%	0.76%
	Neoliberalism	11	2.2%	1.14%	0.59%	0.28%	0.38%
	Post-GFC	7	1.8%	0.77%	0.62%	0.21%	0.29%

Source: Stockhammer and Novas Otero 2025

the dichotomy of export versus consumption-led growth models is only typical of the neoliberal period

Figure 2. Standard deviation of *relative* contribution of demand components across accumulation regimes



debt-led growth?

- Lavoie and Stockhammer: debt-driven growth model
  - Wage/profit-led and export/debt-driven
- Hein and Mundt (2013): debt-led consumption boom
- Later Hein: debt-led private demand boom
  - Negative or close to balance financial balances of the private sector
  - Significant growth contributions of domestic demand and private consumption in particular
  - Positive financial balances of the external sector + Negative growth contribution of net exports
- Stockhammer and Wildauer (2016) Debt-led growth
  - Estimate C(Y, WS, HHD, HP, SP) and C(Y, WS, HHD, BD, HP, SP)
  - Debt, HP, SP as growth drivers -> this is really asset driven growth
- House price-led (Kohler, Tippet and Stockhammer 2023): HP as the key driver of growth

What is behind debt-led growth: emulation vs HP-led growth

Inequality + emulation

- Poor income groups emulate behaviour (consumption) of the next higher income group (conspicuous consumption)
- Several PK take over behavioural argument of consumption emulation: the poor emulate the rich and finance that via debt (Kapeller and Schutz xxx, Setterfield and Kim xxx, van Treeck xxx)
- Implication: inequality ↑ → C ↑ → HHD ↑
- Makes sense as explanation of why households want to comsum more
- But not why banks would want to lend to households
  - Only if there is collateral → house prices

House price-led growth

- HP ↑ → C ↑ and/or residential I ↑ → growth
- HP ↑ → HHD ↑
- 'debt-led consumption boom' is misleading.
  - Investment seems to react more strongly to HP that investment
  - HP-led investment and consumption boom
- Increasing HP. Cyclical dynamics or structural change?
  - Clear evidence for HP cycles. (Borio … Gusella + Sto
  - Trend of increasing HP starts before neoliberalism. Shift in bank balance sheets (Jorda, Schularick)

Consumption equation in Stockhammer and Wildauer (2016)

panel of 18 OECD countries, 1980-2013

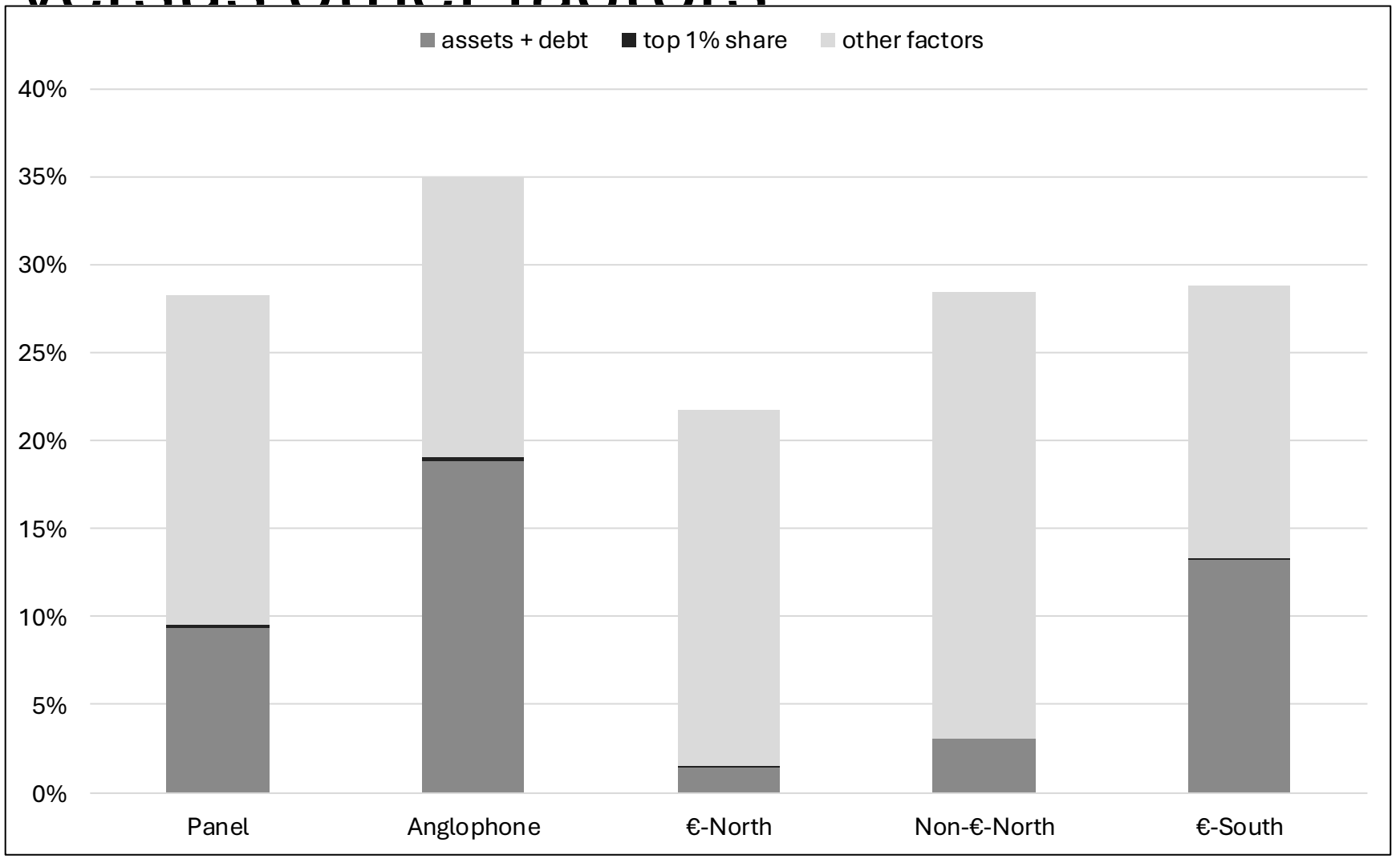
Note that sign of DH is *positive*

PP...real estate prices
SP...share prices
DH...household debt
C...consumption
Y...national income
WS...wage share

	(1) FD	(2) FD	(3) FD	(4) FD	(5) MG	(6) A&H	(7) GMM
$Log(C)_{t-1}$						0.248***	0.373***
$Log(Y)_t$	0.710***	0.716***	0.806***	0.718***	0.633***	0.593***	0.569***
$Log(WS)_t$	0.136*	0.136*	0.141	0.154*	0.144**	0.072	0.078
$Log(PP)_t$	0.017	0.021**	0.011		0.013	0.027***	0.027**
$Log(SP)_t$	-0.002	-0.001	-0.003		0.009	0.003	0.004
$Log(DH)_t$	0.110***	0.105***	0.085***	0.114***	0.128***	0.049**	0.011
$\Delta Log(DH)_t$				0.038*			
$Log(TOP1)_t$	0.008			0.008	-0.017	0.008	0.007
$Log(GINI)_t$		0.027					
$Log(THEIL)_t$			0.018				
cons					1.098**		
N	474	485	361	456	492	448	387
cent. R^2	0.859	0.860	0.879	0.863		0.866	
F-stat	349	342	503	345		602	
p-value Sargan							0.024
p-value Hansen						0.108	0.041
p-value AR(1)							0.200
p-value AR(2)							0.481

* p<0.1, ** p<0.05, *** p<0.01, heteroskedastic and autocorrelation robust standard errors reported in brackets.

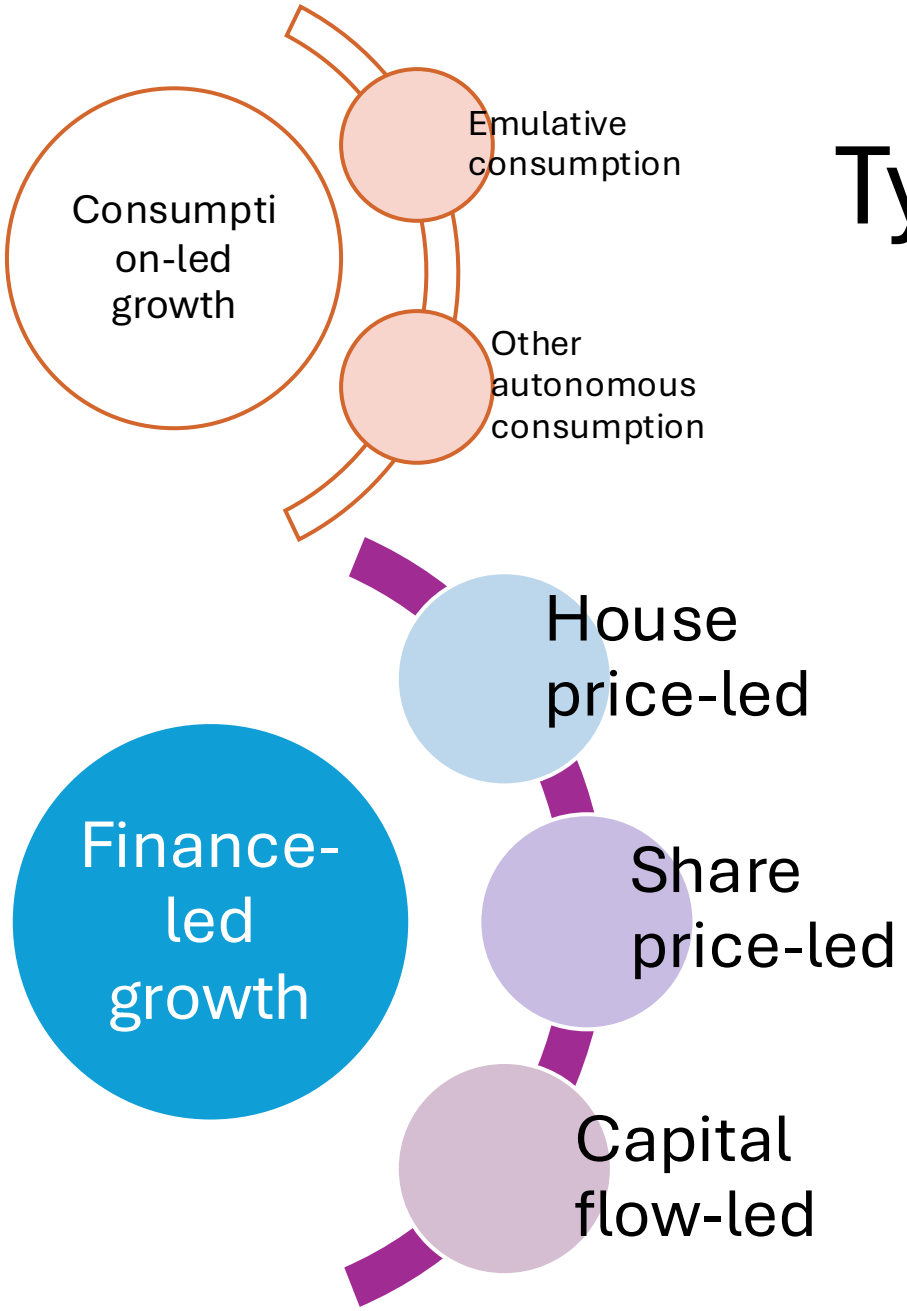
Growth contributions 1997-2007 of asset + debt versus other factors



Finance-led growth? Boyer (2000)

- At the end of dot com boom
- ‘financial norm’: required rate of return on financial assets (dividend payout, share buybacks)
- financial norm ↑ → share prices ↑ → C ↑ (but I↓) → growth

- Since then: little interest in share prices
- For consumption Case and Shiller (2005)



Types of finance-led growth

- Relevant asset price: house prices or share prices?
  - Stronger link between house prices and consumption and investment
  - Real estate wealth more widely held
  - and widely accepted as collateral
- Capital flow-led growth (with FX debt) relevant in particular for emerging economies
  - Can operate via consumption
  - Or investment

Some stylized features of house price-led growth

House price-led growth

- Sustained rise in asset prices (relative to GDP prices)
- Effect of asset prices on economic growth
- Relevant asset price: house prices or share prices?
  - Stronger link between house prices and consumption and investment
  - Real estate wealth more widely held
  - As widely accepted as collateral
- Financialisation = simultaneous rise of (financial) assets *and* liabilities
  - … but the two then have different dynamics -> financial cycles
- Has distinct distributional consequences

House price-led growth model

- Sustained rise in asset prices (relative to GDP prices)
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- Relevant asset price: house prices or share prices?
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- Financialisation = simultaneous rise of (financial) assets *and* liabilities
  - … but the two then have different dynamics -> financial cycles
- Has distinct distributional consequences
- Needs to generate political support

Stylized fact 1: Relative house prices rise since 1970

	1970-2015	1905-1970	1878-1970
Aus	2.8%	1.7%	1.2%
Belgium	2.3%	-0.1%	0.2%
Switzerland	1.3%	0.6%	
Gemany	0.5%	0.5%	1.1%
Dnk	1.6%	1.3%	0.8%
Fin	1.3%	2.0%	
France	2.0%	0.7%	0.9%
UK	3.1%	0.7%	
NL	2.4%	0.1%	0.1%
Norw	3.0%	-0.1%	0.0%
Sweden	2.4%	-0.1%	0.3%
USA	1.2%	0.3%	
mean	**2.0%**	**0.6%**	**0.6%**

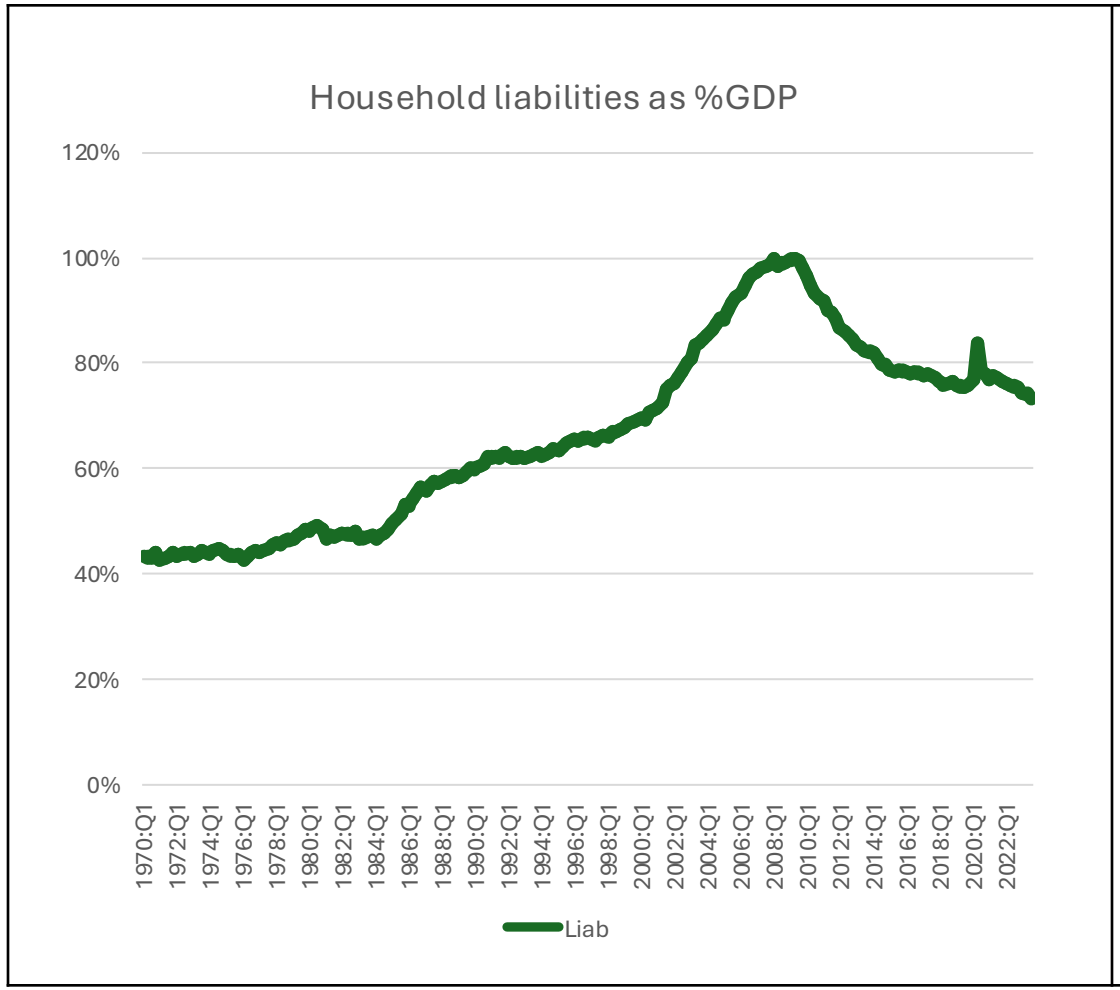
Source: Knoll, Schularick and Steger (2017), Fig. xxx

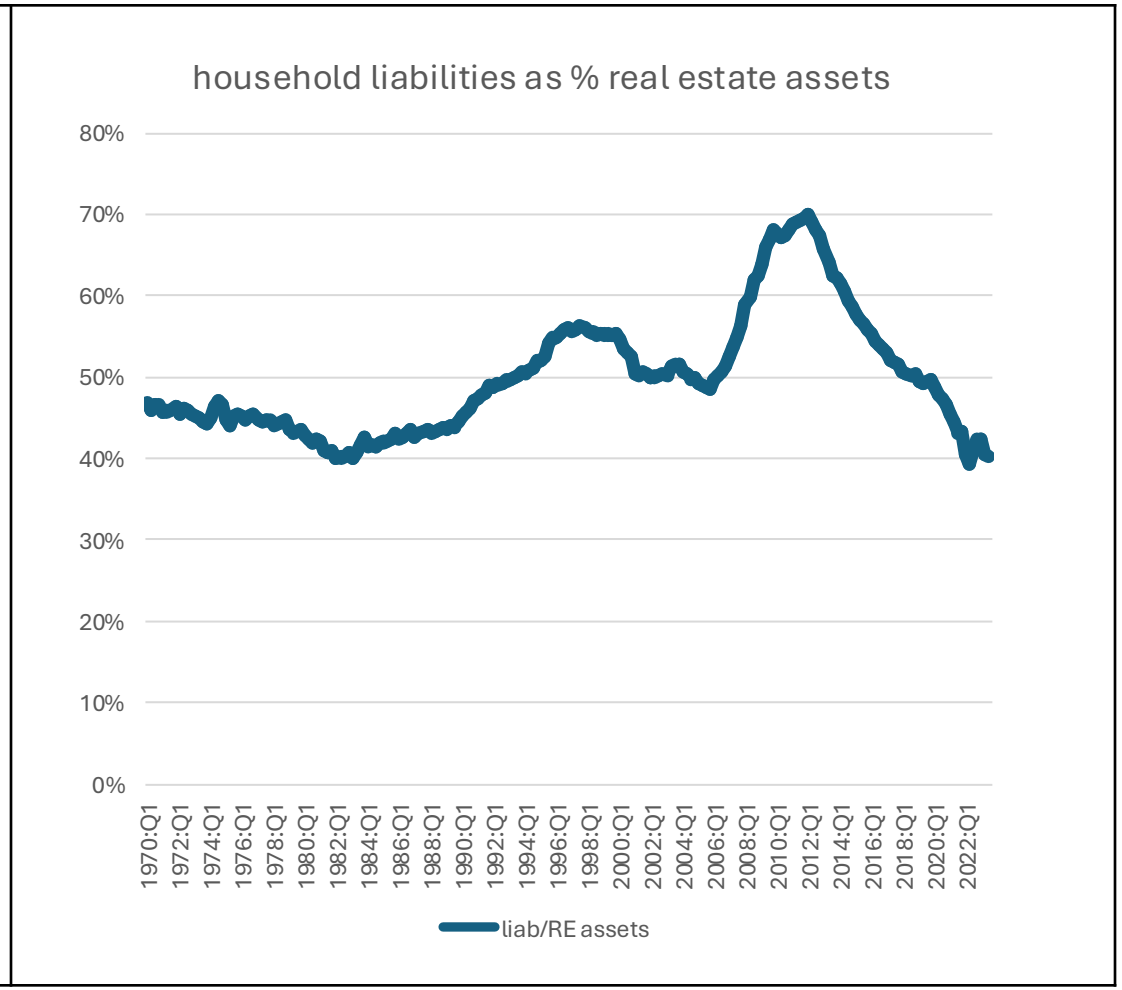
SF2: House prices have strong cycles relative to their trend (since 1970)

country	PP Trend	PP Cycle	GDP Trend	GDP Cycle	Min GDP date	Min PP date
United States	1.36	4.33	2.81	1.36	1970	1970
United Kingdom	3.49	7.82	2.23	3.49	1970	1970
France	2.06	3.33	1.85	2.06	1980	1980
Norway	3.08	6.91	2.49	3.08	1978	1978
Switzerland	0.83	4.25	1.81	0.83	1980	1980
Canada	2.29	5.75	2.58	2.29	1970	1970
Australia	2.73	5.64	3.13	2.73	1970	1970
Mean	**2.26**	**5.43**	**2.41**	**2.26**		

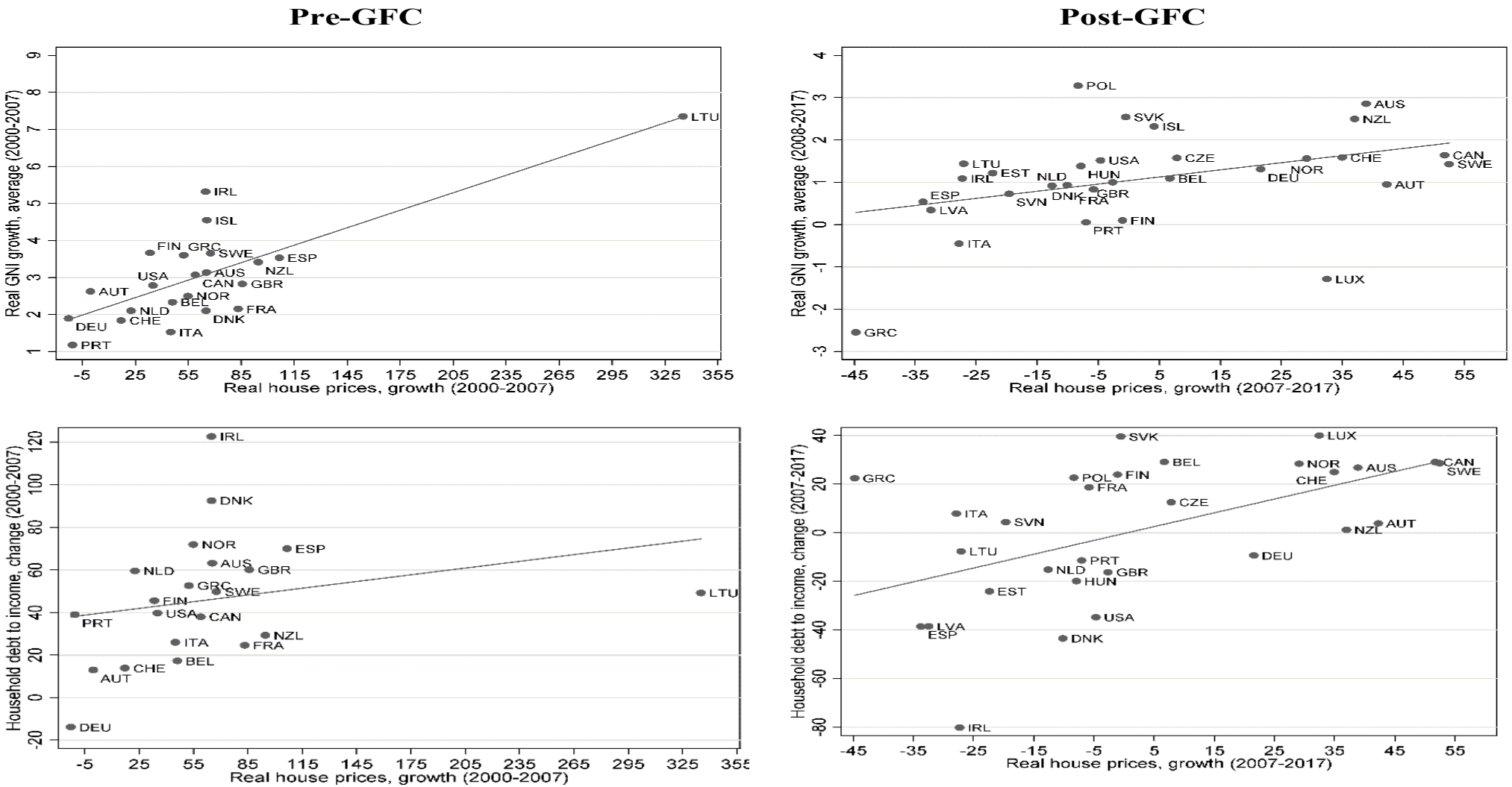
Source: Stockhammer, Tippet and Kohler (2026). PP is relative property prices, GDP is real GDP. The cycle is identified based on a turning point analysis (with quarterly data). The cyclical component is converted to an annual growth rate

household debt-to-income (LTI) has rising trend, while HHD-to-assets (LTV) is flat(-ish), USA





houses price and GDP growth (top) and household debt and HP (bottom)



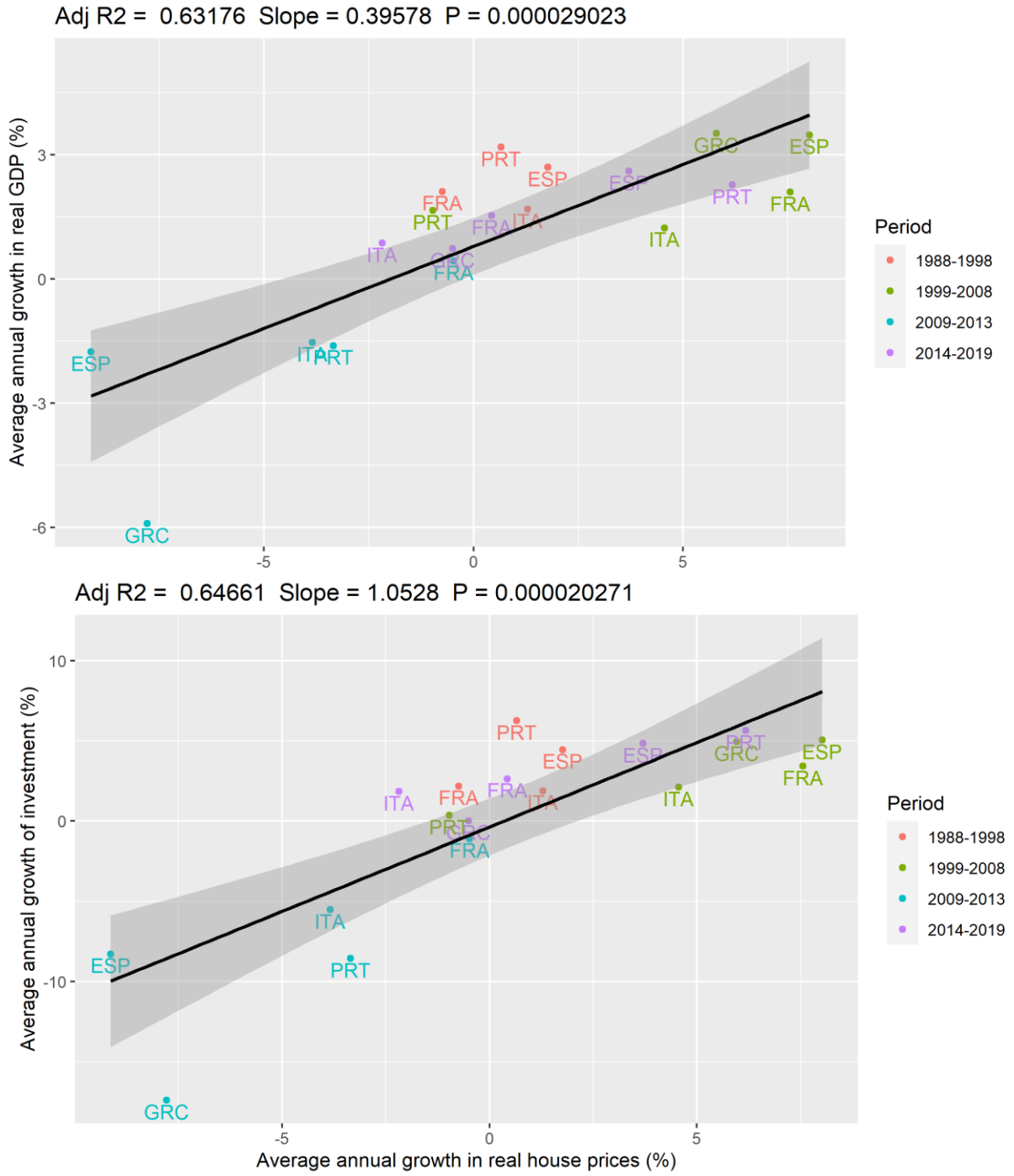
→ Strong link between HPR and growth (p-value: 0.0 and 0.03)

→ Positive link between HHD and HPR (p value: 0.28 and 0.0)

Source: Kohler and Stockhammer (2022 RIPE)

House price growth impacts consumption and investment

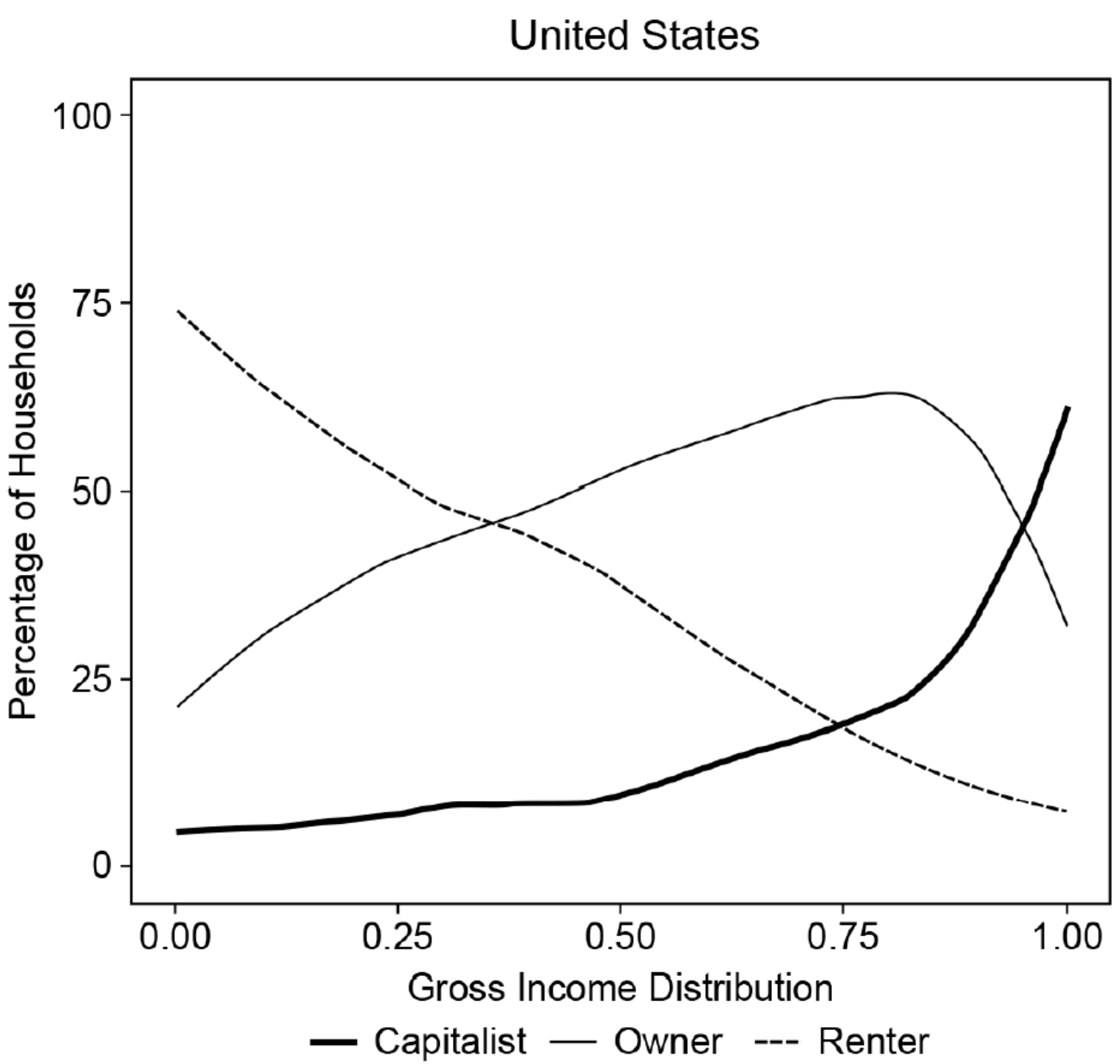
- In GMA: often ‘consumption-led growth’ (Baccaro) or ‘debt-led consumption boom’
- In Stockhammer and Wildauer HP and HHD
- Econ lit and financial cycles lit: HP identified as on key element of financial cycle (Borio)
- Strong evidence of link between HP and economic growth
- That link is even stronger for investment than of consumption



Source: Stockhammer and Novas Otero 2023

Housing classes and income distribution

- Homeownership and income distribution linked
- House price growth benefits homeowner (ca 60% of households)
- House price-led growth will have substantial political support



Fessler and Schurz 2022, Fig 8.3
Data for 2016

Political economy of house price inflation

- Highly unequal distribution
  - Bottom 1/3 hardly any wealth
  - 33 to 95th percentile: home owning dominates
  - Top 5% or higher: financial wealth dominates
- House price growth benefits homeowner (ca 60% of households)

=>House price-led growth will have substantial political support

- Crouch ‘privatized Keynesianism’ (2009); Hay (2009); Toporowski (2009): real estate as welfare state for the middle classes
- Homeowner ship has impact on political preferences regarding the welfare state (Kemeny 2005), link with populism and Brexit vote (Adler and Ansell 2020)
- There is threshold where increasing HP will lock poorer households out of the housing market (xxx ‘generation landlord’)

conclusion

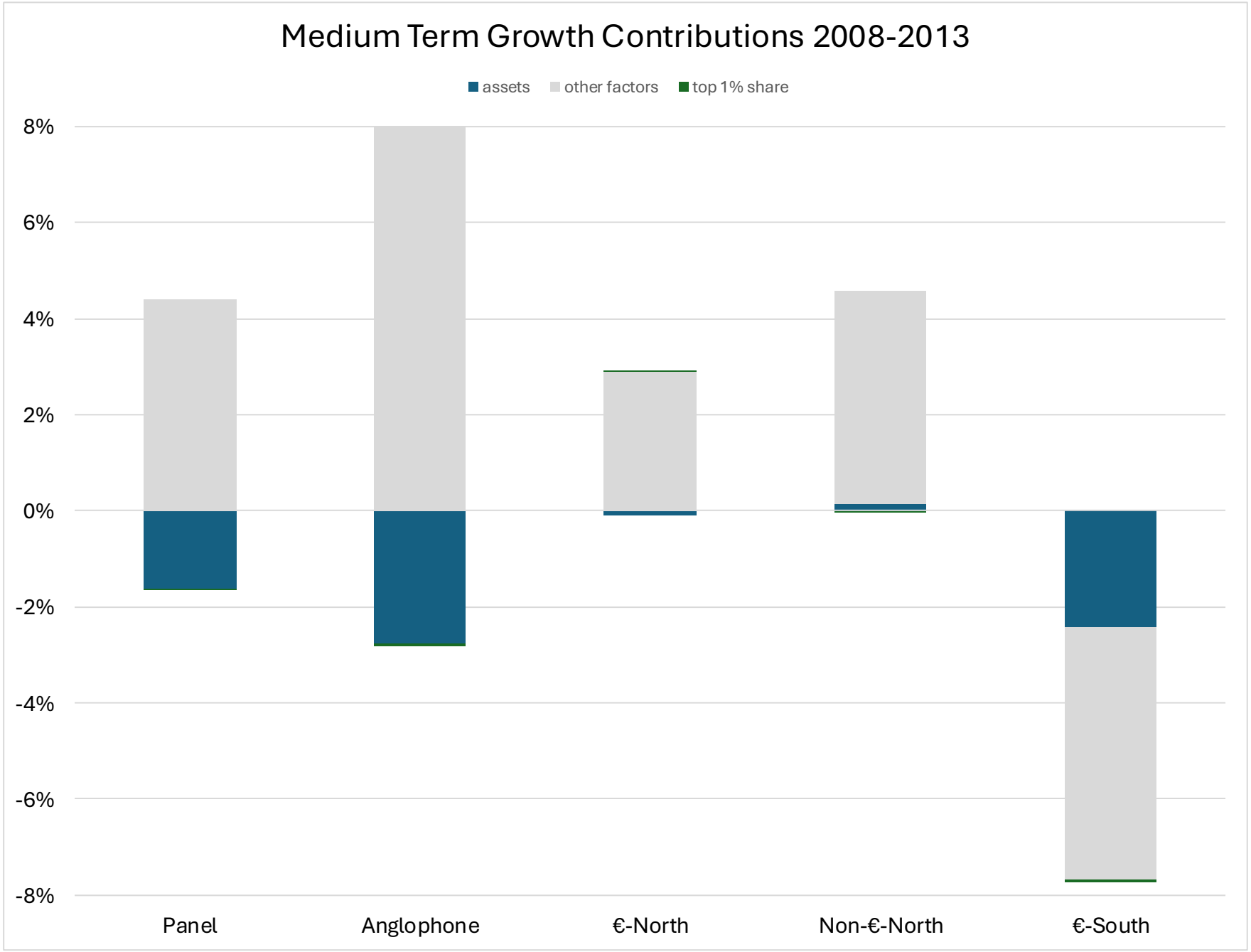
- Disentangle terminology
- Contrast consumption-led growth vs finance-led growth
- House price-led growth as the most important form of finance-led growth (for medium to large advanced economies)
  - Sustained HP inflation since 1970
  - Comes with rising debt (rising LTI, flat-ish LTV)
  - HP have stronger cycles than GDP
  - HP impact consumption as well as investment
  - HP inflation benefits large parts of working class, but leads to fragmentation of working class into homeowners and renters

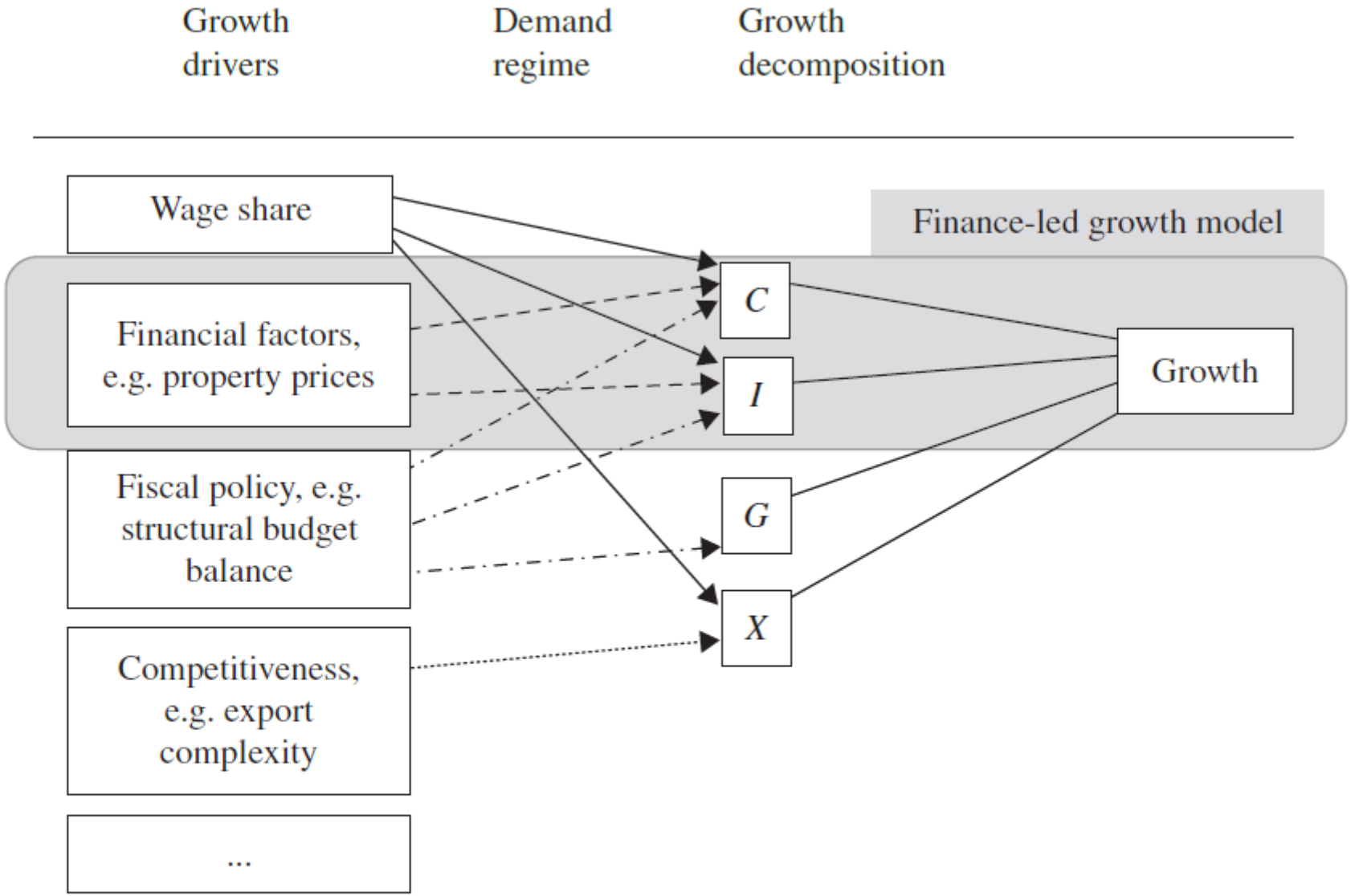
Appendix: reserve slides

Relative size of distribution effects and wealth & debt effects (1997-2007)

		change 1997-2007	Panel	Anglo	€-North	Non-€-North	€-South
		ΔC	31%	42%	13%	29%	29%
		ΔI	34%	46%	18%	48%	52%
		ΔY	28%	35%	22%	28%	29%
Y-SR	(1)	$\beta_{WS}\Delta WS$	-0.17%	-0.08%	-0.07%	-0.02%	-0.16%
	(2)	$\beta_{A}\Delta A$	5.32%	8.72%	1.25%	2.78%	8.64%
	(3)	$\beta_{Q}\Delta Q$	0.10%	0.11%	0.06%	0.04%	0.06%
Y-LR	(4)	$\beta_{WS}\Delta WS$	-0.31%	-0.17%	-0.08%	-0.02%	-0.24%
	(5)	$\beta_{A}\Delta A$	9.42%	18.84%	1.39%	3.03%	13.21%
	(6)	$\beta_{Q}\Delta Q$	0.17%	0.24%	0.06%	0.05%	0.10%

Row (1) reports the short run change of Y between 1997 and 2007 based on the change in WS and the estimates from specifications (1) in Tables 2, 3 and 4. Row (2) reports the predicted change in Y on the changes and the corresponding coefficients of property and stock prices as well as household debt: $\beta_{A}\Delta A = \beta_{PP}\Delta PP + \beta_{SP}\Delta SP + \beta_{DH}\Delta DH$. Row (3) reports the predicted change in Y based on the change in Top 1% income share. The effects in rows (1) to (3) are short run total GDP effects based on f_2 of equation (5). The effects in rows (4) to (6) are long run equivalents to the short run effects also taking into account the multiplier mechanism as represented by f_1 in equation (5).

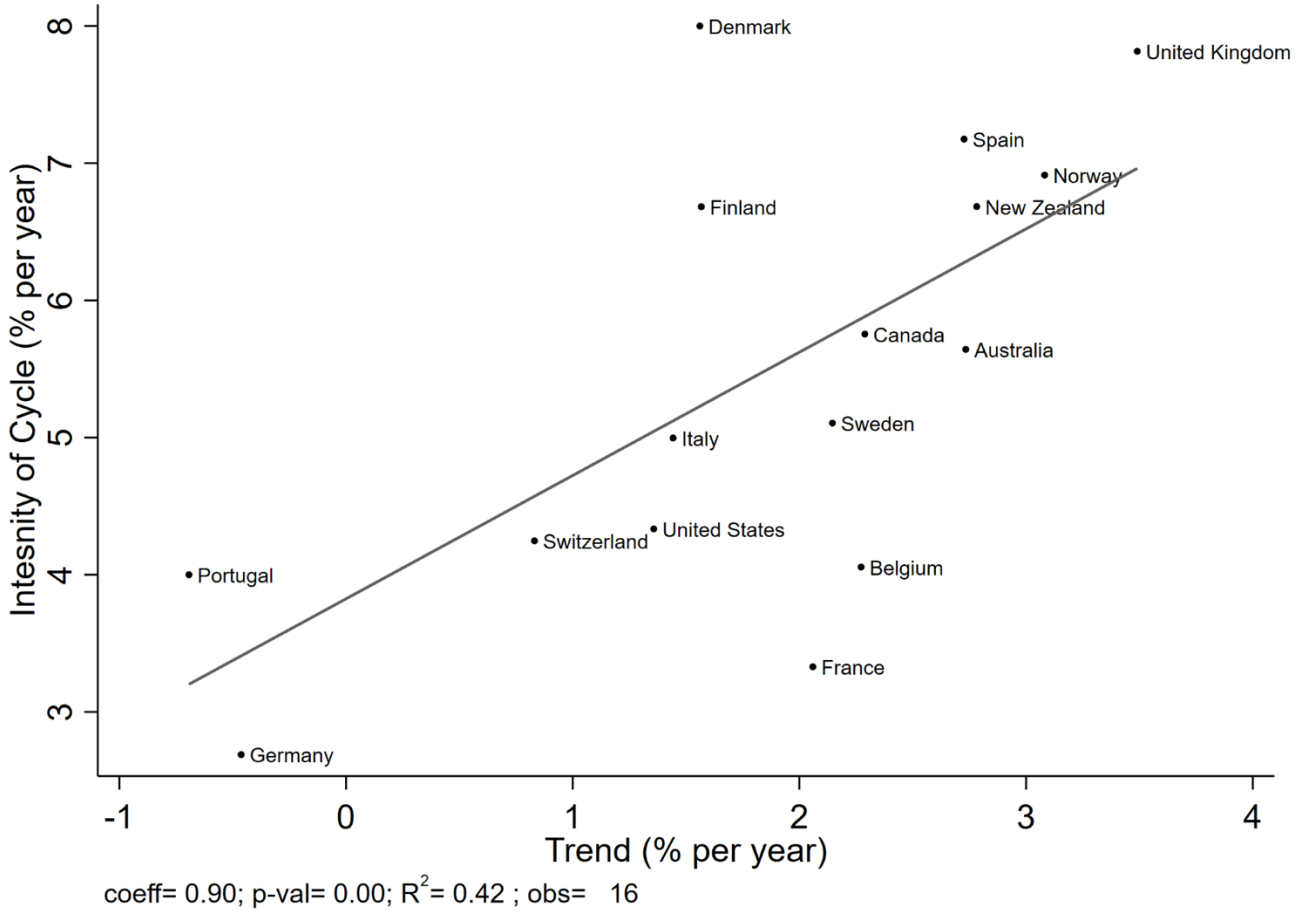

Medium Term Growth Contributions 2008-2013
assets
other factors
top 1% share
8%
6%
4%
2%
0%
-2%
-4%
-6%
-8%
Panel
Anglophone
€-North
Non-€-North
€-South



Notes: The shaded area denotes a finance-led growth model as one possible configuration. Other growth models are possible. C = consumption; I = investment; G = government consumption; X = exports.

Figure 3 Growth drivers, demand regime, and growth decomposition

SF3: House price trend and HP cycle intensity are positively correlated across countries



Countries with higher (trend) house price growth also experience more intense housing cycles

Real HP data
Trend: linear trend
Cycle: turning point analysis (based on detrended data).
Cycle intensity: change/year in a boom or bust episode

A structural Minskyan interpretation

- ‘structural Minskyan’ : Minskyian approach usually focused on financial instability and financial cycles – here used to explain long-term house price inflation
- Minskyan: key ingredients: expectations (expected HP growth) and debt
  - Momentum trader + fundamentalists = asset price cycles
  - Credit constraint momentum traders + uncontrained momentum traders
- asset prices are driven by expectations ((partially) self-fulfilling prophecy)
  - People act on expectations, which impact HP and their levels of debt
  - HP have wealth effects => economic growth
- There is no ‘real anchor’ for asset prices. Ultimately, it’s a convention, driven by expectations; but resulting liabilities need to be serviced
- Elasticity of credit is a precondition, (housing wealth is excellent collateral; allows for more credit generation), but credit is the effect rather than the active variable

A structural Minskyan interpretation, 2

- Financialisation of housing: housing becomes a financial asset that's held in portfolios (rather than to live in)
  - Decline of social housing provision
  - Fnc of housing: financial investor enter housing markets (REIT), Rise of buy-to-let
- => push up prices (SF1)
- => financial cycles (momentum trader mechanism plus Minsky debt cycles) (SF2, 3)
- 'Normal LTI' is historically variable => households are driven into more debt (rising LTI), but those that do gain net wealth (SF4)
  - In short run banks operate with a given LTI, but this gets updated; in the longer term LTV is the key constraint for banks
- HP inflation has distributional implications and needs political support
  - Relative asset price is an income claim by asset owner on current income

Characterising growth

- Clear evidence of the consumption v export-led dichotomy
- But only for a particular geographical scope and historical period: advanced economies in the neoliberal period.
- Signs of internal devaluation as a (failed) growth strategy after the GFC.

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	Neoliberalism	7	100%	45.5%	26.8%	12.3%	21.7%
	Post-GFC	5	100%	44.1%	38.6%	2.0%	15.2%
Southern Europe	Fordism	4	100%	61.7%	30.2%	-7%	12.9%
	Neoliberalism	9	100%	69.9%	30.1%	-21.5%	19.5%
	Post-GFC	3	100%	67.6%	42.6%	-10.5%	5.1%
Eastern Europe	Neoliberalism	8	100%	58.1%	40.0%	-17.0%	8.9%
	Post-GFC	7	100%	48.1%	41.8%	3.7%	10.3%
Asian	Fordism	2	100%	52.4%	38.2%	2.5%	6.8%
	Neoliberalism	3	100%	46.6%	26.2%	8.8%	15.1%
	Post-GFC	1	100%	26.5%	42.6%	6.8%	24.1%
Developing	Fordism	2	100%	66.4%	21.5%	-0.2%	12.4%
	Neoliberalism	4	100%	58.5%	30.2%	-0.8%	10.9%