House price cycles, housing systems, and growth models

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(1) Introduction

Background 1/2

- increased interest in housing markets and household debt since 2008 GFC
- debt-financed consumption of households commonly identified as source of financial instability in certain growth models/regimes
- however, role of housing markets and house prices for these dynamics is unevenly theorised

Background 2/2

- growth models (GM) approach: 'debt-driven' or 'consumption-led' growth → focus on household debt rather than housing (Baccaro/Pontusson 2016; Ban/Helgadottir 2022; Reisenbichler/Wiedemann 2022)
- behavioural finance & PK/Minsky: endogenous housing cycles as driver of business cycles (Dieci/Westerhoff 2012; Ryoo, 2016; Zezza, 2008) → focus on theoretical models rather than cross-country analysis
- comparative political economy (CPE): housing institutions differ across countries → focus on politics and debt rather than house price cycles

Our contribution

- each stream provides useful insights but falls short of a coherent account of the role of housing in GMs
- we combine these frameworks to integrate housing into the GM perspective
- we propose the notion of a 'house-price driven growth model'
- we emphasise the cyclicality of house prices
- we ask why some countries are more likely to experience house-price driven GMs

What we do

1. critically **review** the role of housing in the GM literature, heterodox economics, and CPE
2. offer a **theoretical synthesis** to understand cross-country differences in house price cycles and their role in GMs
3. provide some preliminary **cross-country evidence** for our framework

(2) Housing in growth models, heterodox macro, and CPE

Growth models: Debt-driven consumption-led growth or house price-led growth?

- GM lit: 'debt-driven' or 'consumption-led' growth (Baccaro/Pontusson 2016; Ban/Helgadottir 2022; Reisenbichler/Wiedemann 2022; Hein/Mundt 2013; Lavoie/Stockhammer 2013)
- focus on debt-financed consumption, often theorised as emulative behaviour (poor imitate the rich)
- three shortcomings:
  1. ignores role of collateral for credit supply & demand
  2. ignores (residential) investment as a volatile component of private demand
  3. endogenous cyclicality not fully theorised

Heterodox macro: endogenous cycles in housing

- behavioural finance: asset markets are prone to endogenous cycles (Dieci/Westerhoff 2012, 2016)
  - agents are boundedly rational and follow simple heuristics
  - interplay between momentum and fundamentalist traders
  - generates endogenous cycles
- PK/Minsky: asset market cycles translate into business cycles
  - housing booms drive residential investment but also create financial fragility through debt-financed consumption (Charpe et al. 2011; Zezza 2008)
  - housing booms drive consumption via collateral effects (Caverzasi/Godin 2015; Ryoo 2016)
- shortcoming: abstract theoretical models not readily applicable for cross-country analysis

CPE on housing institutions

- studies cross-country differences in housing systems (Schwartz/Seabrooke 2008; Johnston/Kurzer 2020)
- two institutions identified as crucial (Schwartz 2008; Fuller 2015)
    1. homeownership: size of private housing market
    2. accessibility of mortgage finance: interest rate restrictions, capital gains taxes, LTVs, mortgage subsidies, securitisation
- shortcoming: focus on political outcomes and household debt rather than house price cycles

(3) A framework for integrating housing cycles into growth models

Our framework in a nutshell

1. house prices are key growth drivers in finance-led GMs through wealth effects and residential investment → '**house price-driven growth**'

2. house prices are inherently cyclical: endogenous cycles due to speculative behaviour

3. the intensity of housing cycles depends on institutions: homeownership rates and accessibility of mortgage credit
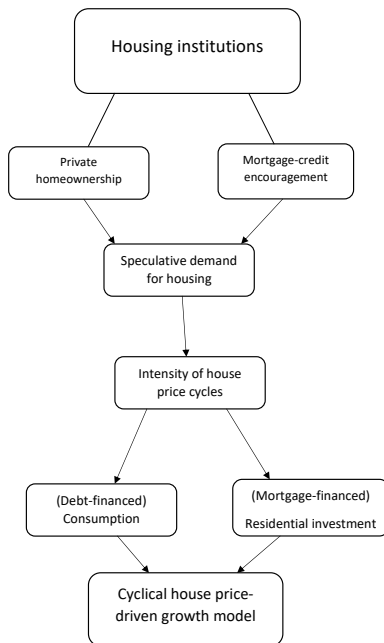
(4) Some cross-country evidence

Turning point analysis

- 32 OECD countries, 1970-2019
- use turning point algorithm (Harding/Pagan 2002; Drehmann et al. 2012; Claessens et al. 2012) to identify turning points in log real houses prices (HPR)
- identify peaks/troughs within a 10 quarter window, impose minimum length of 5 years

Average duration, amplitude, and slope of boom-bust episodes in real house prices, 1970-2019

	Duration (years)	Amplitude (% change)	Slope (% change per year)
Boom	8.7	50.3	6.3
Bust	5.7	35.3	7.4
Average	7.5	44.2	6.6

Average slopes of booms in house price cycles against busts, 1970-2019


coeff= 0.37; p-val= 0.00; R^2= 0.58; obs= 31
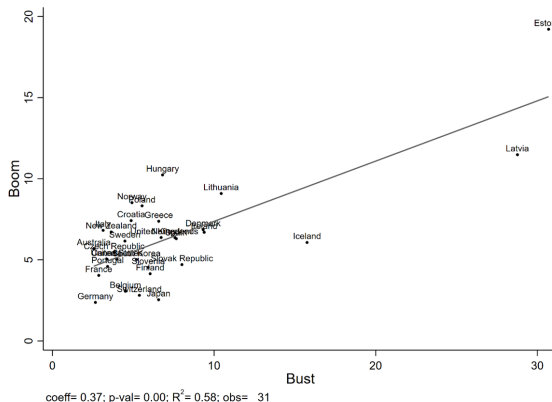
- intense booms are typically followed by intense busts (even w/o EST+LTV)
- supports Minskyan notion of endogenous cycles

# Share of countries in a house price boom or bust, 1970-2019
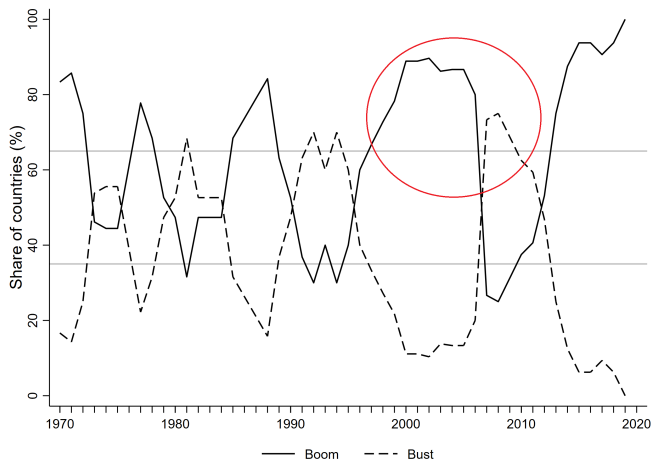
- synchronised boom before GFC and since 2013
- otherwise moderate synchronicity $\rightarrow$ country-specific housing cycles

Average slope of house price cycles by country group, 1970-1994 and 1995-2019
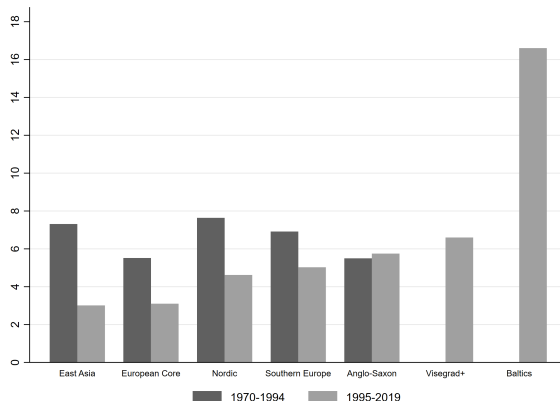

- increase in cross-country heterogeneity in second period
- Anglo-Saxon and Eastern Europe exhibit most intense cycles (in second period)

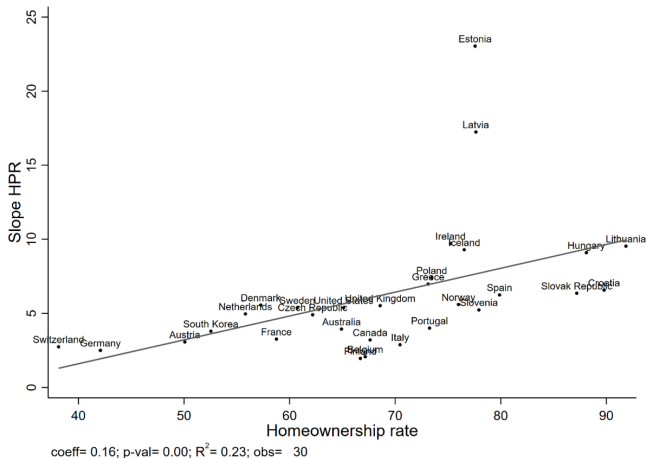Average slopes of house price cycles against slopes in real GDP and household debt to GDP ratio, 1995-2019
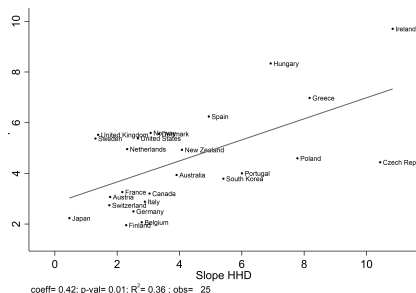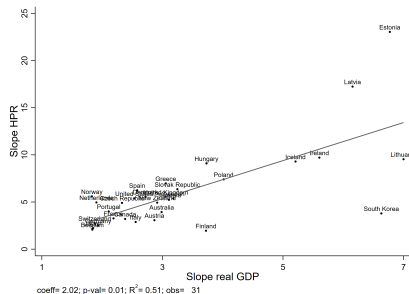
- countries with more volatile housing cycles also have more volatile business cycles
- same for financial cycles in household debt
- supports notion of cyclical 'house-price driven growth'

Average slopes of house price cycles against average relative growth contribution of investment, 1995-2019

coeff= 0.29; p-val= 0.01; R^2= 0.45; obs= 31
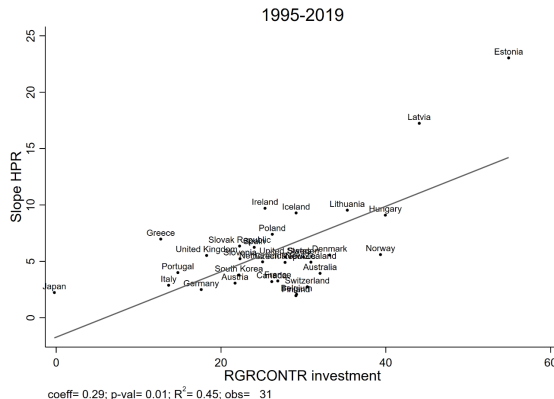
- countries with more volatile housing cycles exhibit a higher average growth contribution of investment
- supports the residential investment channel

Average slopes of house price cycles against average homeownership rate, 1995-2019

coeff= 0.16; p-val= 0.00; R^2= 0.23; obs= 30

- countries with higher homeownership rates exhibit more intense housing

Average slopes of house price cycles against mortgage credit encouragement index, 1995-2019

coeff= 0.52; p-val= 0.03; R^2= 0.07; obs= 31

- countries with easier access to mortgage credit exhibit more intense

(5) Conclusion

Summary

- house price dynamics are key to growth models analysis
- house prices are cyclical – but their intensity differs across countries
- cross-country differences are related to institutions
- countries with high homeownership rates and easy access to mortgage credit are more likely to experience unstable house-price driven growth

Implications

- Minskyan approach as missing link between CPE of growth models and CPE of housing systems (Ryoo 2016; Zezza 2008; Schwartz/Seabrooke 2008; Fuller 2015)
- points to the relevance of housing institutions for macroeconomic stability
- policy implications (Ryan-Collins 2021):
    - revert privatisation of public housing stock
    - land value tax
    - tenant protection
    - macroprudential regulation of mortgage market