Discussion of
Looking Behind the Financial Cycle: The Neglected Role of the Demographics
by A. Ferrari

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Workshop on "Secular Stagnation and Financial Cycles"

Banca d'Italia – September 27, 2017

This paper

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- ▶ What this papers does
    1. Documents time-variation in the size of demographic cohorts
    2. Uncovers a correlation between the age composition of the population and financial variables
    3. Builds a 3-period OLG model that matches the patterns observed in the data

This paper

- This paper explores "the role of demographic trends as potential drivers of the financial cycle"

- Why this paper is important
  - Debate on the drivers of the boom-bust cycle in house prices and debt
    - Credit supply vs. over-optimistic expectations
  - This paper considers a dimension that received much less attention in the literature
  - Important because policy implications are different

The main mechanism in a nutshell

- ▶ Transitory positive demographic shock increases the size of young cohort

- ▶ Output per capita increases, leading to higher demand for consumption and housing (complementarity)

- ▶ Increase in demand is cleared through a price increase (fixed supply)

- ▶ When baby-boomers become middle-aged, output, house prices and debt peak, while the interest rate troughs

- ▶ As the cohort of baby-boomers grows old, these dynamics go into reverse

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- ▶ Is the mechanism proposed in this paper new?

  - Paper would benefit from a more detailed discussion of the existing literature, so as to clarify its contribution

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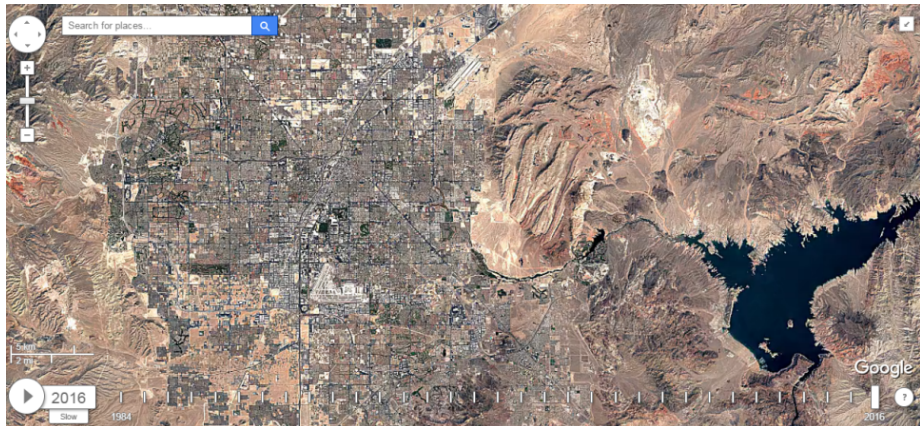
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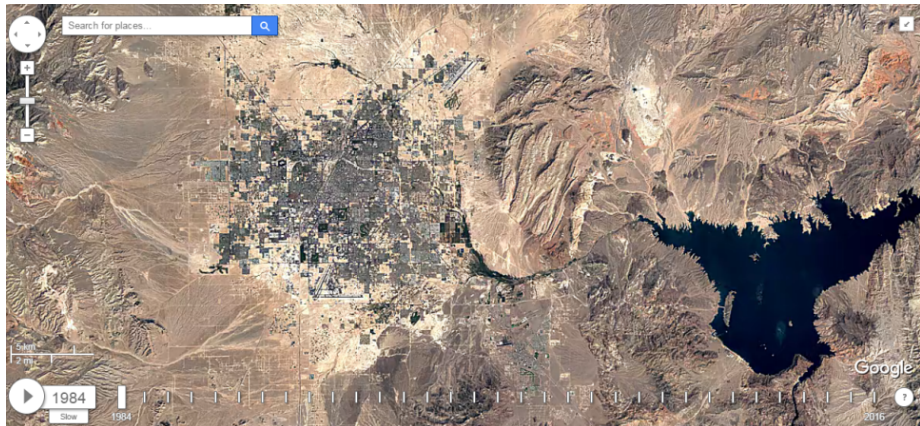
NOTE. Chart from "Timelapse – Google Earth Engine". Timelapse is a collection of 33 annual cloud-free satellite pictures from 1984 to 2016, which are made interactively explorable by Carnegie Mellon University CREATE Lab. See more at https://earthengine.google.com/timelapse/

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- ▶ For example, one could fix housing supply *per capita*

  - Housing supply increases when the baby-boom shock hits

  - How would the results change?

Comment #3: Why the focus on post-war data only?

▶ House price and credit data available from 1870 [Schularick and Taylor (2017), Knoll, Schularick, and Steger (forthcoming)]

▶ Dependency ratio available on an even larger sample [UN Population Statistics and www.mortality.org]

▶ Given the medium/low frequency of the analysis, long run data can be particularly valuable

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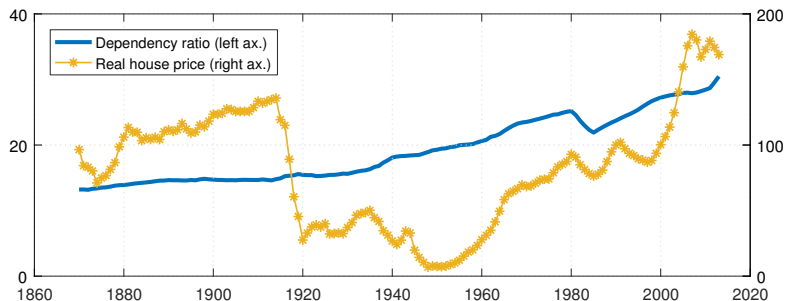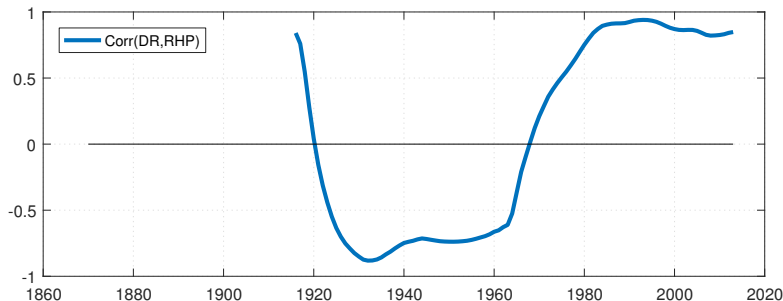
The case of France

NOTE. Real house prices are from Jorda, Schularick, and Taylor (2017) and Knoll, Schularick, and Steger (forthcoming), deflated with CPI also from Jorda, Schularick, and Taylor (2017). Dependency ratio ($age > 65$ divided by $20 < age < 64$) is from UN Population Statistics and www.mortality.org.

▸ Dependency ratio and real house prices in France in the long-run somewhat disconnected

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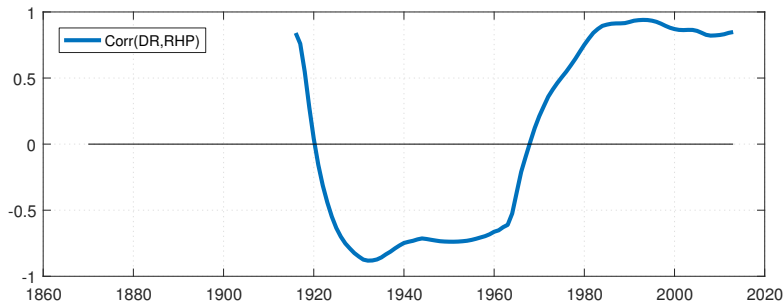
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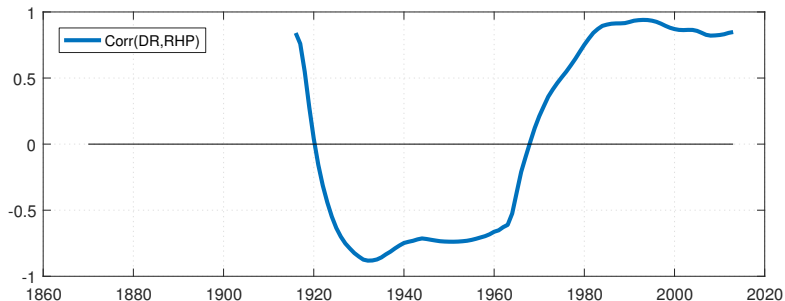# Comment #3: Why the focus on post-war data only?

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  • Unimportance of demographics?

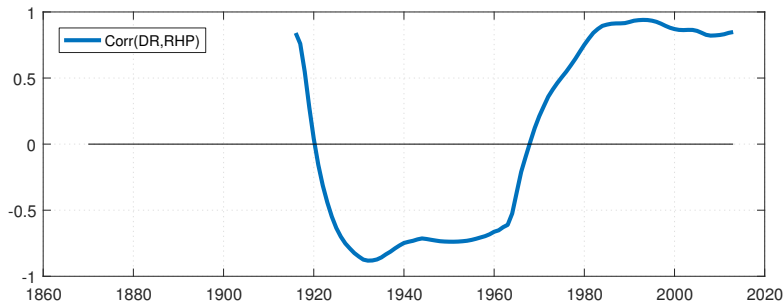# Comment #3: Why the focus on post-war data only?

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  • Or noisy data / structural changes / trends vs. cyclical variation / other?

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- Not necessarily a problem, but worth investigating more

Comment #4: Other stuff

- ▶ Absence of financial frictions (e.g., Loan-To-Income and Loan-To-Value constraints)

- ▶ The role of increased longevity and life expectancy

- ▶ Others

  - Focus more squarely on house prices and debt. Not sure what the financial cycle measure by Drehmann et al. (2012) adds to the analysis.

  - Why a third-order approximation around the steady state?

  - Lack of consistency in data for stylized facts/calibration (US, UK , Italy). Also, more info on sample periods is needed.

  - Panels in Figure 15 are a bit confusing. Horizontal axis in Figure 16 is not clear.

  - Quite preliminary (fix references to Figure numbers, typos, etc).

Summing up

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  - Clarify contribution, focus on novel stylized facts, explore different assumptions on housing supply

- ► More quantitative work is needed
  - Is the mechanism in the model quantitatively relevant? How much can it explain of the variation in house prices and debt?
  - How crucial is the demographic factor?

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- Interesting, but quite preliminary paper
  - Clarify contribution, focus on novel stylized facts, explore different assumptions on housing supply

- More quantitative work is needed
  - Is the mechanism in the model quantitatively relevant? How much can it explain of the variation in house prices and debt?
  - How crucial is the demographic factor?

- Potentially important contribution
  - Could speak to the very much debated question of the drivers of the boom bust cycle of house prices and debt in the run up to the crisis

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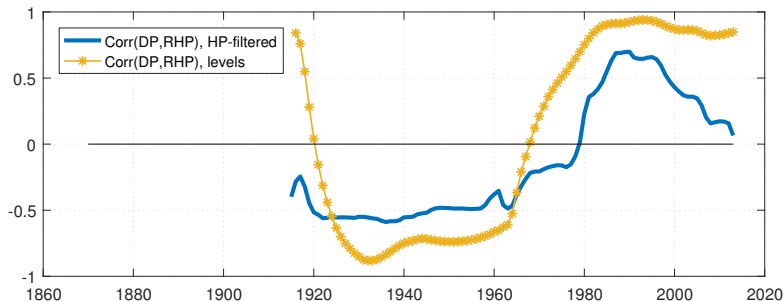
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Appendix

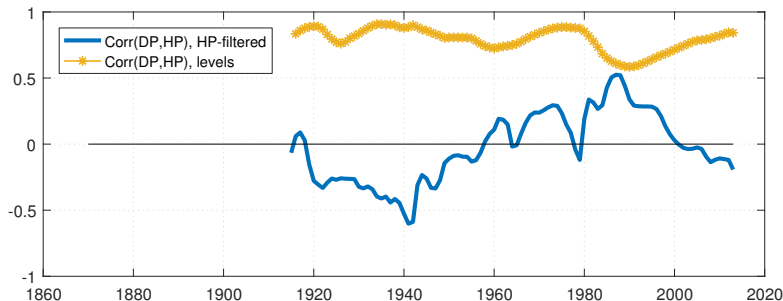# Comment #3: Why the focus on post-war data only?

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▶ Correlation between Dependency ratio ($age > 65$ divided by $20 < age < 64$) and real house prices (HP-filtered, $\lambda = 100$)

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▶ Correlation between dependency ratio and nominal house prices (HP-filtered, $\lambda = 100$)