The engines of debt: Household debt, homeownership and the mortgage boom in the United States, Germany, Spain and Italy

Tod Van Gunten

Max Planck Institute for the Study of Societies

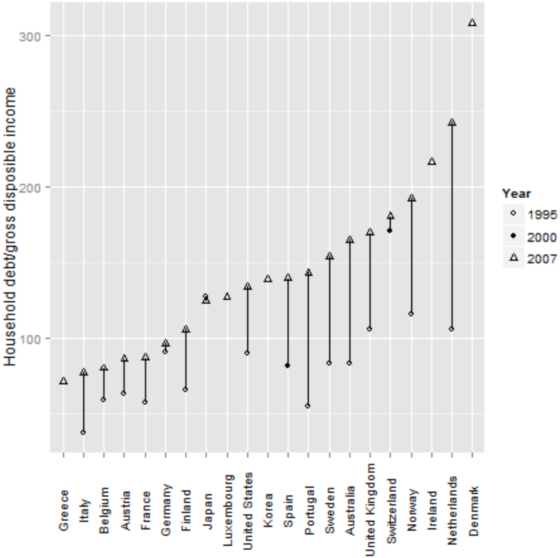
tvg@mpifg.de

July 1, 2017

Research question

What explains the uneven expansion of household debt across developed countries during the global mortgage boom?

Debt in comparative perspective



The literature so far

Homeownership and household debt.

- “In making homeownership easier to obtain by making debt easier to take on and to manage, the United States is unparalleled” relative to other developed countries” (Prasad 2013)
- Subprime market: ‘marginal’ borrowers, rising homeownership

Price shock:

- Cost of entering market rises
- Homes as ‘piggy banks’ (Davis 2009)

Engines of debt

Inclusion: changes in debt ratio due to changes in **homeownership** rate

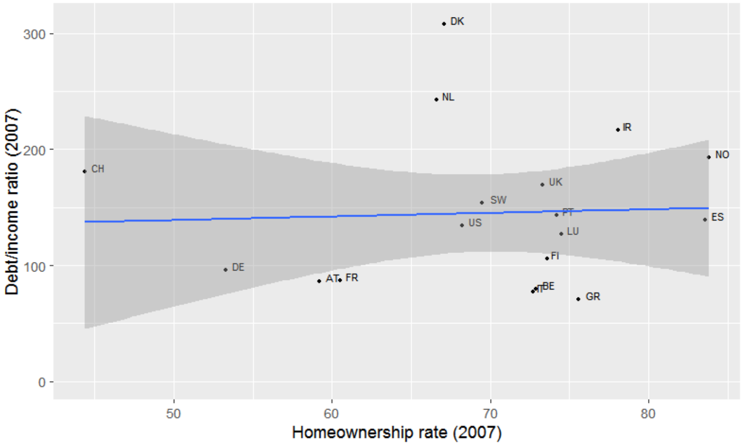
Extension: changes in debt ratio due to **mortgage market participation rate** (MMPR)

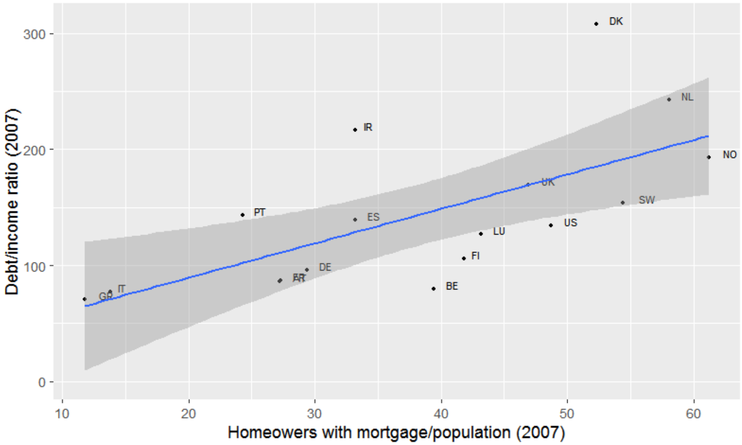
Intensity: changes in debt ratio due to **average borrowing**

A simple disaggregation

$$\frac{debt}{income} = \frac{\sum debt}{\sum income}$$
$$= \frac{N_{HO}}{N_{POP}} \times \frac{N_{HOM}}{N_{HO}} \times \frac{mean\ debt_{HOM}}{mean\ income_{POP}}$$

HOM	Homeowner with mortgage
HO	all homeowners
POP	population


DK
NL
IR
NO
CH
UK
SW
PT
ES
US
LU
FI
DE
AT
FR
IT
BE
GR
300
200
100
0
50
60
70
80
Debt/income ratio (2007)
Homeownership rate (2007)

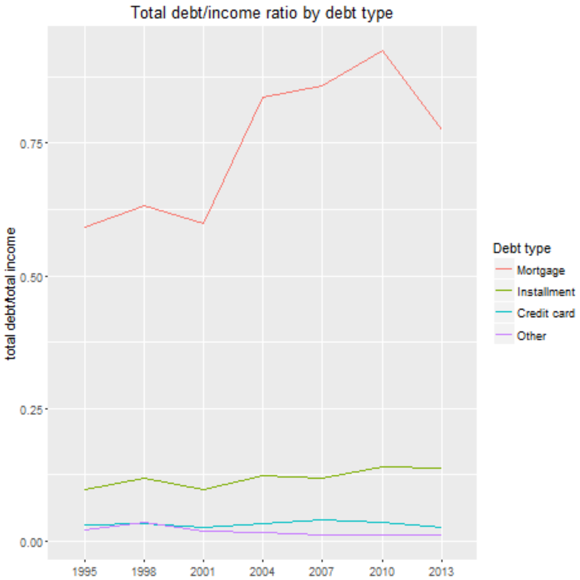

300
200
100
0
10
20
30
40
50
60
Debt/income ratio (2007)
Homeowers with mortgage/population (2007)
DK
NL
IR
NO
UK
SW
PT
ES
US
LU
FI
DE
BE
IT
GR

Change over the boom years

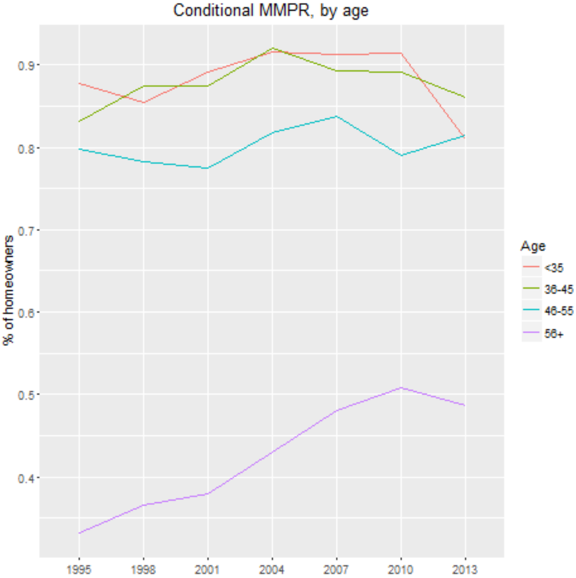
Variable	1995 value	Peak year	Peak value	% Change
Total debt/income ratio	89.6	2007	134.2	50%
Homeowner rate	65.1	2004	69.2	6%
MMPR*	40.9	2007	48.7	19%
Median debt/income ratio	101.0	2010	160.9	59%

*Mortgage market participation rate

Mortgages dominate debt



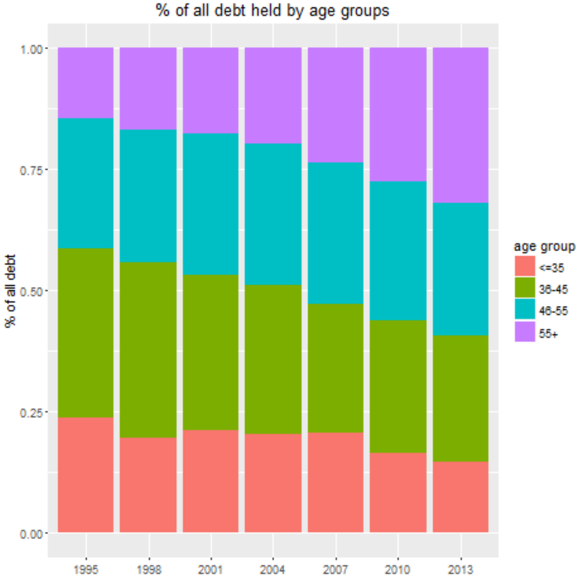
Older households remaining in the market



Older households remaining in the market

Engines of debt

Tod Van Gunten



Decomposition approach: Oaxaca-Blinder

Given a standard regression model $y = \alpha + \beta X \ldots$

To what extent are differences between groups explained by:

- Differences in 'endowments' (values of X)?
- Differences in 'coefficients' (values of β?)

Approach: decompose the difference in 1995 and 2010 household debt *among homeowners*

- Changes in population composition (extension)
- Changes in average borrowing (intensity)
- Increasing representation of 'marginal' borrowers

Debt decomposition results

Δ debt due to extension: 17% of net increase

Δ debt due to intensity: 82% of net increase

Other results:

- No evidence that increasing prevalence of young/low income/minority homeowners contributes to rising debt.
- But low income/credit constrained households were able to borrow more on average (intensity)

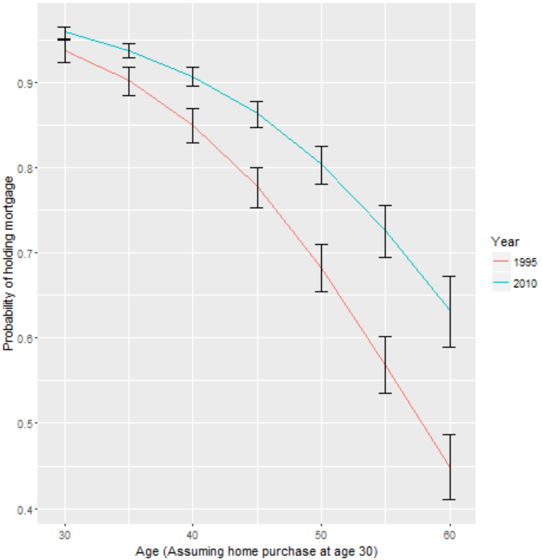
Overall: intensity strongly dominates either inclusion or extension.

MMPR decomposition

What explains the rising MMPR in the US?

- No evidence that increase in the MMPR is due to recent, ‘marginal’ homebuyers
- Rather, evidence suggests increase is due to older homeowners delaying mortgage repayment.

Slowing exit from the mortgage market



Conclusion: why it matters

Inclusion is consistent with rising social welfare (from some normative perspectives)

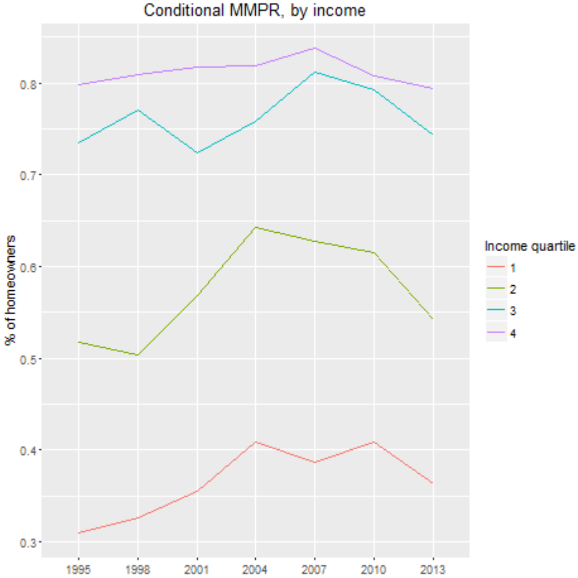
- Democratization of finance?

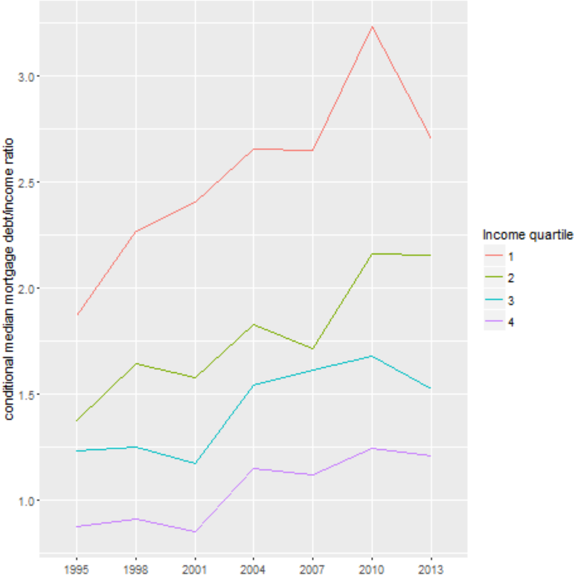
Rising home prices increase inter-generational inequality.

If most of the increase in debt is explained by intensity, very little social benefit at the price of rising inequality.

Thank you

email: tvg@mpifg.de


Conditional MMPR, by income
% of homeowners
0.3
0.4
0.5
0.6
0.7
0.8
1995
1998
2001
2004
2007
2010
2013
Income quartile
1
2
3
4


conditional median mortgage debt/income ratio
3.0
2.5
2.0
1.5
1.0
1995
1998
2001
2004
2007
2010
2013
Income quartile
1
2
3
4

		France	Germany	Italy
Counter-factual base				
Spain	Counter-factual	78.9	75.1	76.9
	Percent change:	0.31	0.31	0.61
Portugal	Counter-factual	70.3	66.9	67.8
	Percent change:	0.16	0.20	0.65
Netherlands	Counter-factual	103.9	104.7	106.5
	Percent change:	0.33	0.37	0.50