Taxing Wealth in the Presence of Liquidity Constraints: Evidence from France

Laurent Bach (ESSEC, IPP), **Arthur Guillouzouic** (PSE, IPP) & Clément Malgouyres (CREST, IPP)

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Motivation

- **Wealth taxes** are often seen as a **backstop tax** for when **income** is **mismeasured** or difficult to tax.
  - High in the public debate: G20 proposal for global billionaires wealth tax, Sanders/Warren proposals in the US 2020 presidential campaign.
- Wealth taxes could **compel households** owning assets with low-liquidity and low returns to **sell illiquid assets** (at a discount)
- In practice, most real-world wealth taxes have **capped** the **tax** at a **fraction of income**
  - Capped households get 0 MTR on wealth / high MTR on income.
- However, such **caps reduce** the **equity** of the tax system if
  - households with apparently low income actually own liquid assets
  - high net worth individuals reduce their taxable income without affecting their real income

Conflicting anecdotal evidence

Wealth tax affecting poor households in places with high land prices

Sur l'île de Ré, l'ISF frappe les non-imposables

La Rochelle (Charente-Maritime)

Par Pierre Sauvey

Le 19 mars 2005 à 00h00



Billionaires not paying any wealth tax post cap

	NOM PRENOM	Montant de l'ISF avant plafonnement	Montant du plafonnement	Montant de l'ISF après plafonnement
1	BETTENCOURT LILIANE	81 312 871	81 450 310	0
2	MERIEUX ALAIN	11 276 289	11 356 451	0
3	[redacted] PHILIPPE HAVAS LOUIS	10 402 856	9 277 181	1 452 768
4	PEUGEOT ROBERT CLAUDE	7 762 853	8 703 372	646 581
5	ARNAULT BERNARD	8 047 823	6 604 360	2 243 291
6	DECAUX JEAN CLAUDE	4 683 975	4 542 158	178 287
7	DUBAS PHILIPPE	4 389 297	4 069 876	309 091
8	[redacted] CAROLINE	6 145 734	4 014 734	131 632
9	[redacted] JEAN-MARIE	5 271 351	3 954 977	1 316 844
10	[redacted] PHILIPPE	4 127 202	3 902 681	224 247
11	[redacted] VERONIQUE	4 793 709	3 835 655	670 243
12	[redacted] CHARLES PAUL	4 855 141	3 498 083	1 357 058
13	[redacted] ANNY	3 662 083	3 177 372	0
14	[redacted] PIERRE	3 888 397	3 145 677	743 020
15	MENTZELOPOULOS CORINNE	3 140 399	2 968 845	153 316
16	[redacted] DIDIER	3 056 510	2 977 033	164 977
17	[redacted] PIERRE	2 873 758	2 827 843	32 655
18	[redacted] BERTRAND EMILE	3 158 469	2 625 617	202 854
19	[redacted] GERARD	2 249 134	2 203 730	0
20	[redacted] JACQUES PIERRE	3 897 210 [illegible]	2 474 247	1 186 017
21	[redacted] GERMAIN	2 049 [illegible]	2 475 245	73 921
22	[redacted] MARCEL	2 [illegible]	2 421 688	14 092
23	[redacted] ALBERT	2 [illegible]	2 369 495	0
24	[redacted] HUGUE	2 [illegible]	2 333 553	398 441
25	[redacted] HARRY FREDERIC	3 230 484	2 216 810	1 014 879
26	DARTY HELENE	2 317 716	2 211 126	106 590
27	MENARD JEAN PIERRE	4 341 100	2 154 384	2 186 716
28	[redacted] JEAN PAUL	2 991 324	2 092 854	898 970
29	[redacted] SEBASTIEN	1 818 085	1 787 840	0
30	[redacted] PIERRE ALEXANDRE	2 547 446	1 654 106	599 944
31	[redacted] NOAM MICHEL	1 612 762	1 607 381	0
32	[redacted] OLIVIER	3 264 403	1 607 288	237 146
33	[redacted] FRANCOIS	1 818 761	1 607 186	91 138
34	[redacted] JEAN	3 356 965	1 707 800	1 480 760
35	LECLERC HELENE	1 833 364	1 717 524	0
36	[redacted] GERARD	1 824 310	1 710 745	0
37	[redacted] ELIZABETH	1 734 022	1 626 961	27 381
38	[redacted] ALAIN	1 851 653	1 659 151	0
39	[redacted]ANGLE NORBERT	1 651 468	1 603 134	20 934
40	MULLEZ BRIGITTE	1 686 693	1 604 947	202 209
41	[redacted] YVES	1 760 776	1 614 858	100 937
42	DAHAN JOSEPH JEAN CLAUDE	1 651 234	1 553 652	107 670
43	MURLAIS CHRISTIANE	2 641 833	1 693 184	1 061 448
44	[redacted] XAVIER GILLES	1 837 283	1 655 210	145 673
45	[redacted] JEAN PAUL	1 851 051	1 545 451	30 891
46	[redacted] PIERRE	1 617 840	1 536 503	151 337
47	[redacted] ODILE	1 653 870	1 592 307	36 863
48	LONGEVITE JACKY FELIX ADOLPHE	1 827 210	1 617 852	300 169
49	[redacted] THIERRY	1 834 291	1 621 083	82 981
50	DALLOZ GERETTE	1 464 711	1 350 377	0
	TOTAL	215 850 806	193 742 077	21 311 462
	Projection après d'un an d'augmentation de 10 000 € d'amortis		20,06%	0,65%

DOCUMENT PARLEMENTAIRE

What we do in this paper

We use the **French context** to answer **2 main questions**:

1. Did **capped households** really hold **illiquid wealth**?
2. Did **capped households** really have **low returns** (or just low *apparent* returns)?

What we do in this paper

We use the **French context** to answer **2 main questions**:

1. Did **capped households** really hold **illiquid wealth**?

▷ We measure the **strength of liquidity constraints** among capped households
  → **Descriptive** stats on wealth composition
  → Responses to a **one-year cancellation of the cap** in 2012

2. Did **capped households** really have **low returns** (or just low *apparent* returns)?

What we do in this paper

We use the **French context** to answer **2 main questions**:

1. Did **capped households** really hold **illiquid wealth**?
2. Did **capped households** really have **low returns** (or just low *apparent* returns)?

▷ We measure the **ability** of **high net worth** individuals to **manipulate** the level, composition and timing of their **taxable income**

→ Responses to the (quasi-)**cancellation** of the **wealth tax** in 2018

This paper: what we find

1. **No evidence** of **liquidity constraints** among **capped** households
   - Capped households own a **large share** of **liquid assets** (quick conversion into cash at no discount)
   - The **one-off lift** of the cap in 2012 **did not erode** household **wealth**

2. **Sizable income responses** to the **abolition of the WT** on financial wealth in 2018:
   - **Taxable income goes up** significantly, implied **ETI** is **1.7**

   $\Rightarrow$ suggests **capped households** have some **leeway** in **timing** their income and making themselves poor in terms of taxable income

Literature and contribution

The impact of wealth taxes on taxable wealth

- Previous studies (e.g., Seim, 2017; Brulhart et al., 2022) focus on **elasticity of taxable wealth**
- Jakobsen et al. (2022) use capped households as a control group to estimate the effect of a Δ in the marginal tax on wealth on taxable wealth.

Wealth tax and the design of the tax system

- Saez & Zucman (2019), Scheuer & Slemrod (2021), Bastani & Waldenström (2023) discuss the rationale behind having a wealth tax and its properties.
- Garbinti et al. (2024) study the information dimension of wealth tax design in French context.

▷ **Contributions**:

1. We investigate an understudied dimension of wealth tax design: cap based on taxable income
2. We estimate how households respond to the cap in terms of 1/ portfolio composition and 2/ reported income

▷ Institutional context and data

Brief History of the French Wealth Tax Cap

▷ **Wealth tax cap**

- Introduced at the inception of ISF in 1989, at 70% of taxable income.
- Threshold changed (raised to 85% of income in 1991, lowered to 75% in 2013).
- Additional rules de facto increasing or limiting it (*Capping of the cap* in 1995, *Tax Shield* = broad-based cap from 2006 to 2011).

▷ **2012 reform**

- One year cancellation of the cap.

→ Temporarily restores non-zero marginal tax rate on wealth for capped households

▷ **2018 reform**

- Abolition of wealth tax except on net real-estate wealth.
- WT cap becomes irrelevant for most taxpayers.
- Joint introduction of a 30% flat tax on most capital income

→ Reduces marginal tax rate on income for capped households

Data

- **Universe of French income tax data:** POTE, DGFiP, All types of income declared as part of income tax (form 2042) as a panel over the period 2006-2021.
  $\approx$ 37M observations / year
- **Universe of French wealth tax data** : ISF-IFI, DGFiP, panel data over the period 2006-2021.
  $\approx$ 360k observations / year

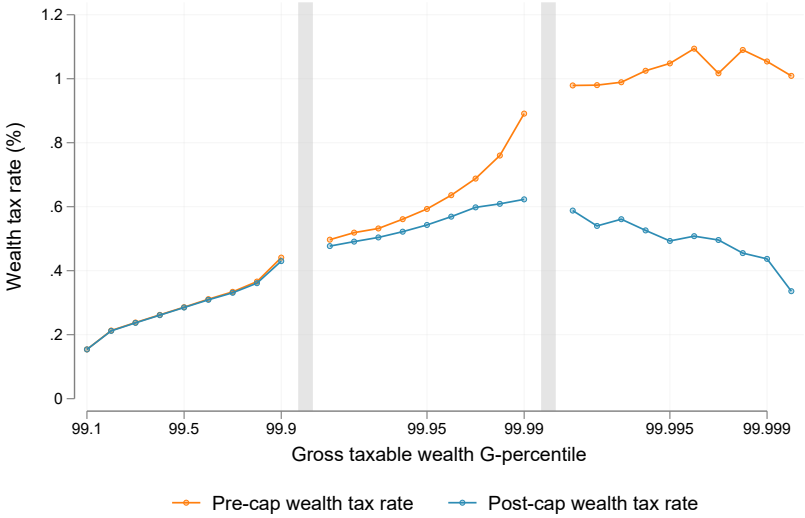
▷ Wealth and asset composition of capped households

Quantitative importance of capped households

	Total number of households	Share of capped households (%)	Share of capped households (%), weighted by:		
			Wealth	Pre-cap wealth tax	Post-cap wealth tax
All wealth taxpayers	356,229	3.17	13.30	29.65	11.96
By wealth bracket					
– 1.3 to 2.57 M€	257,729	0.57	0.61	0.77	0.22
– 2.57 to 10 M€	91,426	6.25	8.77	12.97	6.88
– 10 to 50 M€	6,639	56.95	62.17	65.34	38.73
– above 50 M€	437	72.54	64.14	80.94	41.39

- Capped households represent 3% of WT payers, 13% of taxable wealth, 30% of pre-cap wealth tax, 40% of life insurance holdings.

Pre and post-cap wealth tax rates, within top 1% of wealth distribution

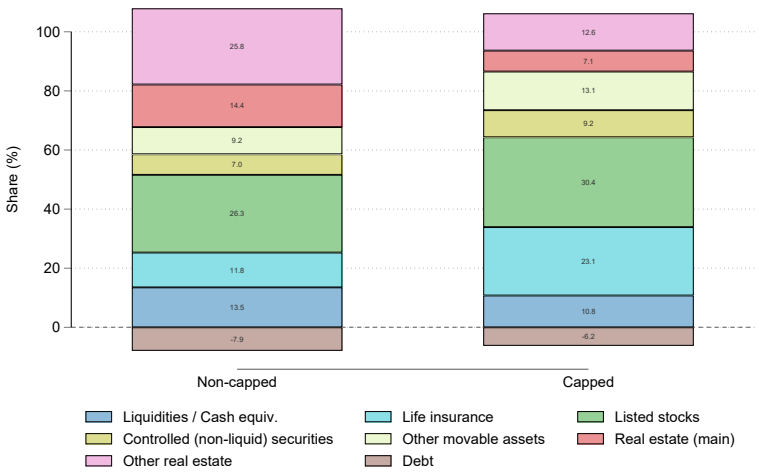


Descriptive statistics (for 2017), above 2.57M€

	Uncapped				Capped			
	Mean	Median	1st quartile	3rd quartile	Mean	Median	1st quartile	3rd quartile
# fiscal shares	2.076	2	1.250	3	1.874	2	1	2.750
Age ref. person	69.28	69	52	87	67.63	68	49	87
Gross wealth, k€	4727.3	3749.2	2836.3	7018.9	13929.1	8760.9	3670.6	26625.2
Taxable wealth, k€	4473.1	3536.1	2699.9	6662.6	13281.8	8494.2	3509.1	26091.3
Taxable income, k€	311.4	138.6	51.4	531.5	130.8	60.2	6.9	282.3
Prog. Income tax / TI	0.201	0.190	0.0289	0.380	0.178	0.129	0.0119	0.442
Flat Income tax / TI	0.132	0.126	0.0839	0.165	0.219	0.151	0.0929	0.406
Pre-cap wealth tax / TI	0.166	0.129	0.00794	0.391	3.724	1.279	0.519	8.957
Post-cap wealth tax / TI	0.166	0.129	0.00794	0.391	0.565	0.534	0.165	0.956
# obs.	91,290				9,817			

- Average taxable wealth among **non-capped** households $\approx$ 4,7 M euros
- Average taxable wealth among **capped** households $\approx$ 14 M euros
- Average income is 60% smaller among capped households

Portfolio composition of capped and non-capped wealth taxpayers



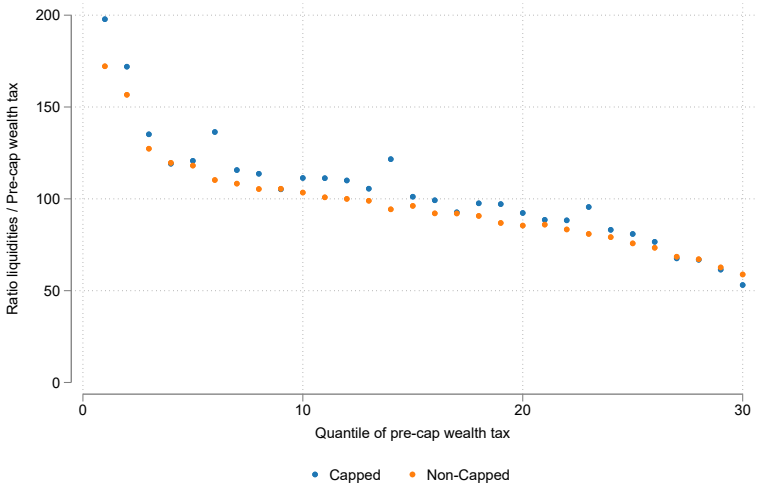
- A large share of assets held are liquid: if anything this share is higher among capped households.
- Note that capped households are on average much richer.

Above 100M€

Liquidities by wealth bin

Ratio of liquid assets over annual ISF bill (before capping)

Households ranked by size of WT bill



- We consider **the wealth tax before applying the capping**.
- Capped households have the same pre-cap WT coverage as liquid assets as non-capped.
- On av. 50 years among the wealthiest households.
- Very low prevalence of low ratios by wealth tax bill

  See Distribution | See post-cap
- Similar proba to be owner-manager

  Owner-manager

▷ Responses to the one-year lift of the wealth tax cap

One-off lift of the cap system in 2012: Context

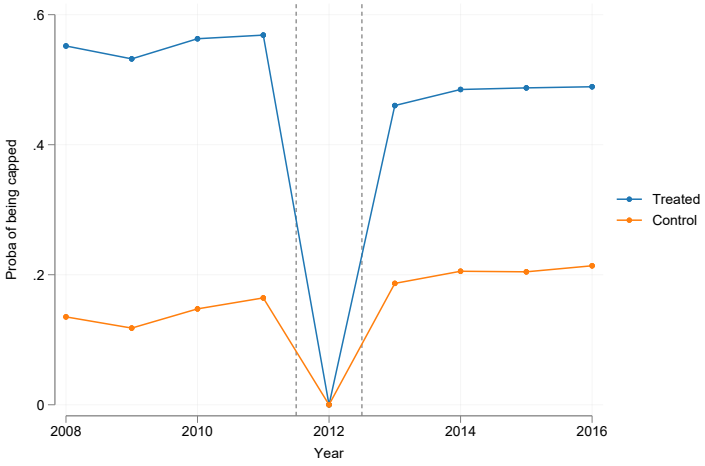
- Before 2013, wealth tax cap was set at 85% of taxable income paid in income+wealth taxes.
- In 2012 (and 2012 only), the cap was cancelled.

- **Question :** did households who should have benefited from the tax cap liquidate some of their wealth during year 2012?
  - If that is the case, we should observe low returns because of discount on illiquid asset sales.

Identification approach

- **Most natural approach:** DiD by comparing households that were previously capped with those that were not.
- **Issue :** Many of those capped are so because their income is **temporarily** low
  - $\rightarrow$ strong reversion to the mean.
- Two types of taxes: 1/ taxes based on taxable income and 2/ wealth tax
  - $\Rightarrow$ only wealth tax puts you above the cap
- **Our approach :** intent to treat (ITT), comparison of households according to their ratio [pre-cap WT / maximum taxable income 2007-2010].
  - 'treated' : high ratio ($>$ 60 %)
  - 'control' : moderate ratio (bet. 30 and 60 %)

Large gap between treated and control groups on proba of being capped in 2012



Differential drop in probability to be capped by around 32 pp in 2012.

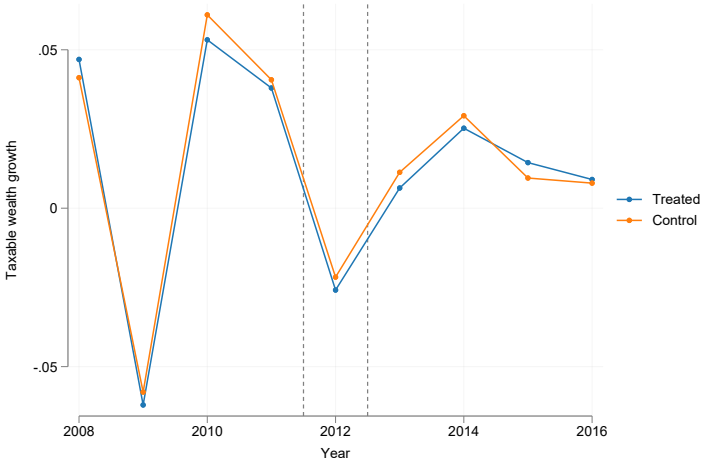
Dummy cap regression

WT rate raw

WT rate regression

MR check

No significant gap in wealth growth for "un-capped" households in 2012-2013



Very similar pattern of yearly returns to wealth.

No difference across groups in 2012.

Returns regression | MR check | Capital gains

▷ Responses of capped households to the (quasi-)cancellation of the wealth tax

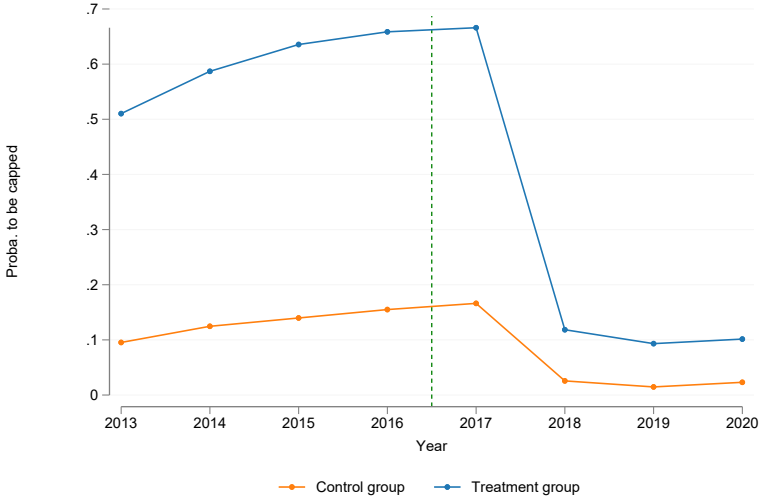
The 2018 reform and the particular situation of capped households

- The 2018 French wealth tax reform reduces the tax base to net real estate wealth: cap becomes irrelevant for most.
- Capped households see the **marginal rate applied to their income fall sharply**.
  - The cap implies a high marginal tax rate on taxable income: 75%.
  - The wealth tax reform lowers this rate to the level of the marginal rate on the income tax schedule.
- The **rate reduction** is **particularly strong for income eligible for the flat-tax**.
  - The combined IFI-PFU effect increases the applied rate from 75% to 30% for capped households opting for the PFU in 2018.
- **Question:** How responsive are the different types of income to this reform?

Identification approach: similar to 2012

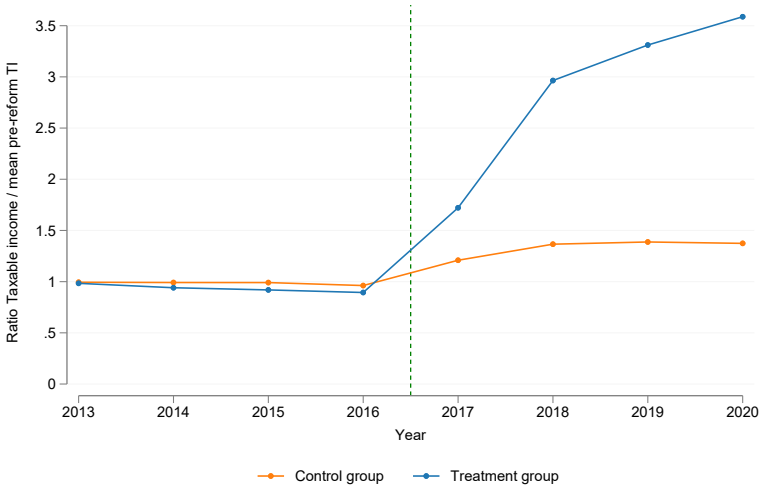
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- **Issue :** Many of those capped are so because their income is **temporarily** low
  - $\rightarrow$ strong reversion to the mean.
- **Our approach :** intent to treat (ITT), comparison of households according to their ratio [pre-cap WT / maximum taxable income 2013-2016].
  - Threshold was at 75% (vs 85% in 2012)
  - 'treated' : high ratio ($>$ 50 %)
  - 'control' : moderate ratio (bet. 20 and 50 %)
- **Year of treatment:** Reform decided in 2017, implemented on ISF 2018, but WT cap is **calculated on 2017 income**.
  - Highly manipulable income: possible reaction for 2017 income.
  - More constrained income (e.g. dividends): reaction in 2018.

Probability of being capped each year, by group



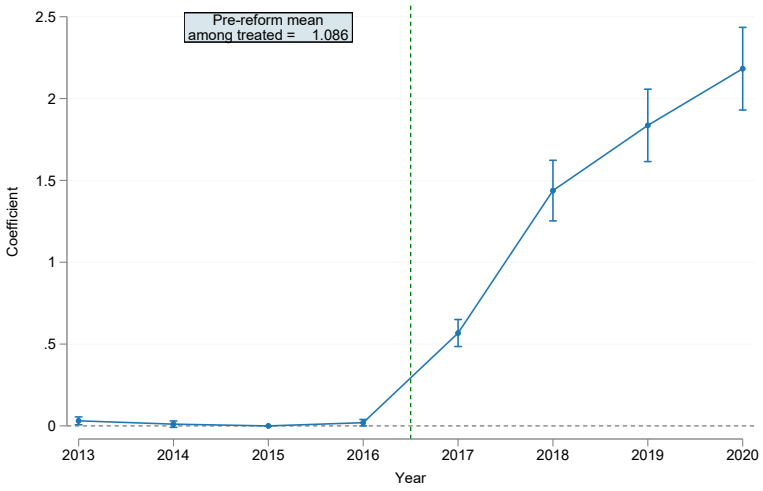
- Differential effect between groups of 30 percentage points in the probability of being capped. Regression

Taxable income (norm. by mean pre-reform TI), by group



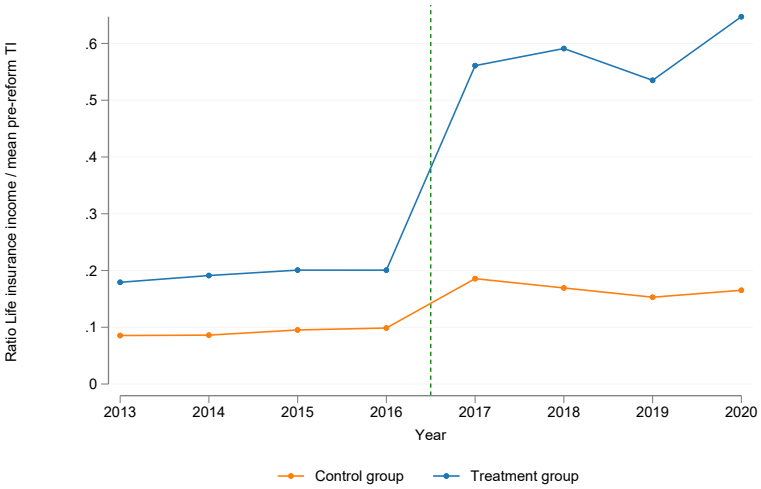
- Increase in taxable income = +200 % among treated.
  - ▸ Absolute level
  - ▸ Changing window: 1st stage
  - ▸ Changing window: 2nd stage

Taxable income (norm. by mean pre-reform TI), by group



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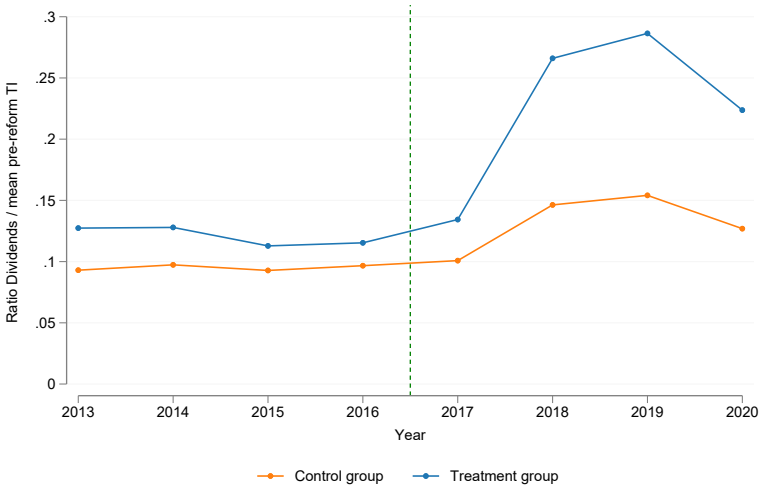
Life insurance income (norm. by mean pre-reform TI), by group



- Life insurance income : $\times$ 3 among treated households
- increase $\approx$ 30 % of taxable income pre-reform

▸ Reg
▸ Distributional reg

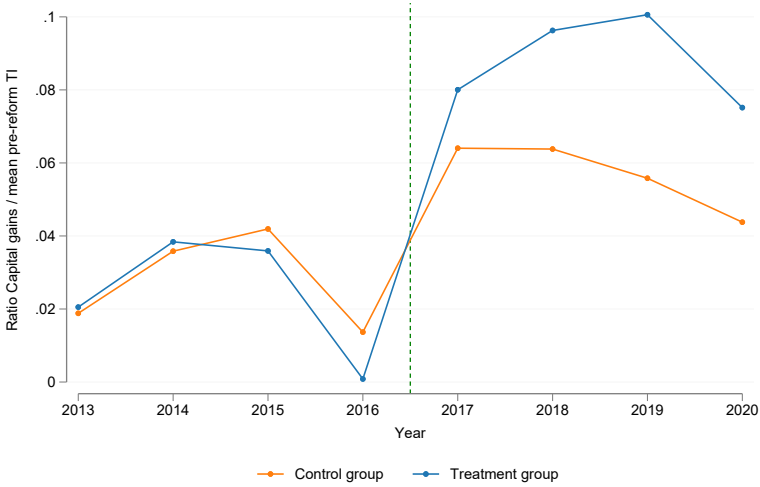
Dividends (norm. by mean pre-reform TI), by group



- Increase in dividends = + 8% of pre-reform taxable income
- This is on top of the increase in dividends caused by the flat tax (PFU)

Reg Distributional reg

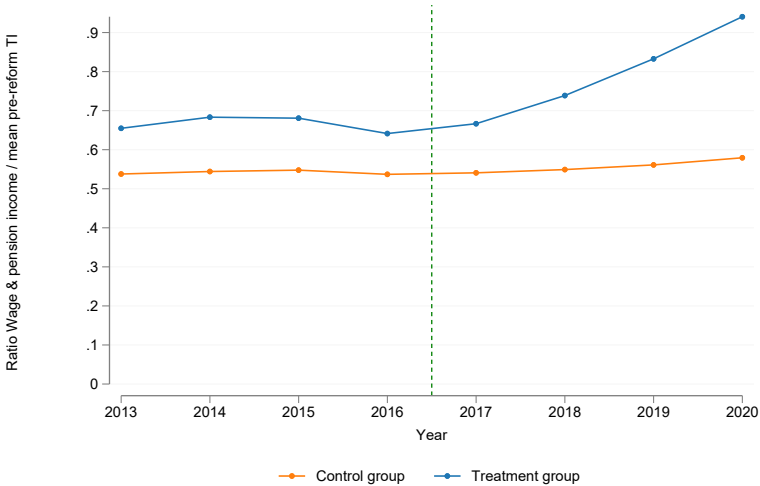
Pre-reform average capital gains, by group



- increase $\approx$ 4 % of pre-reform taxable income.

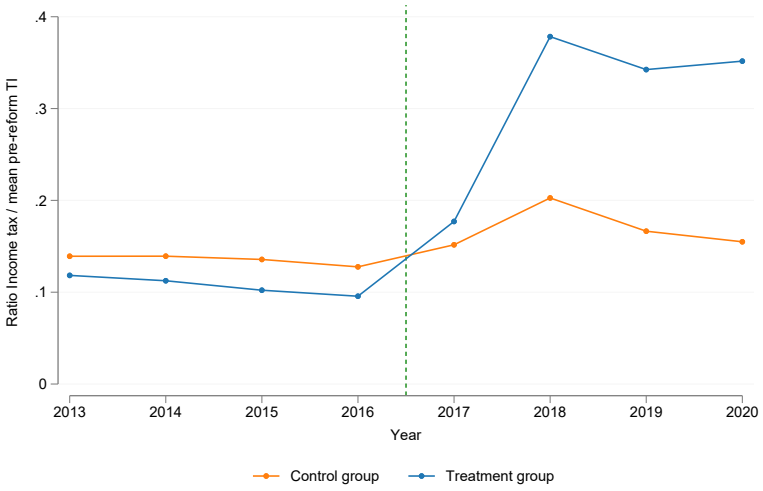
Labor income

Salaries + pensions (norm. by mean pre-reform TI), by group



- gradual rise in wage and pension income
- $\approx$ 20 % of pre-reform TI in 2020
- increase possibly driven by owner-managers

Income tax (norm. by mean pre-reform TI), by group



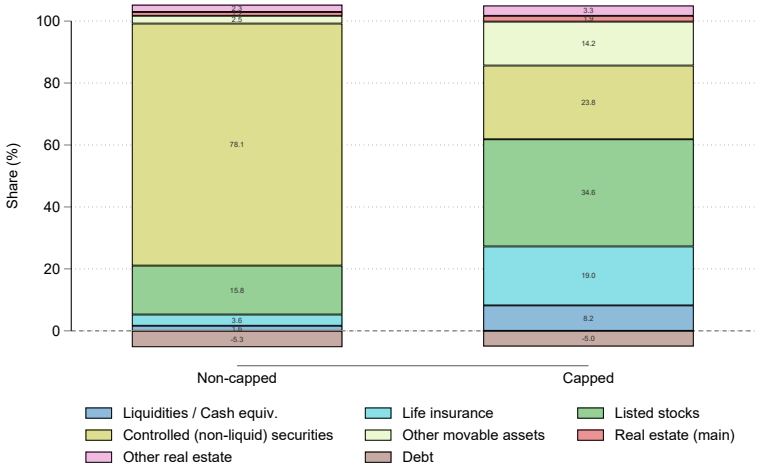
- Income tax rises from 10 to 35% of pre-reform TI
- Large income response implies that budgetary cost of capping 2× greater once income responses are accounted for.

Conclusion

- The risk of asset over-liquidation due to the wealth tax seems limited.
- Many types of "plastic" capital income are better captured by the wealth tax than the income tax.
- Paradox: the WT cap seems to limit the WT effectiveness precisely where it captures the contributive capacity better than the income tax.
- True cost of the cap for public finances was much higher than it seemed: avoidance of the WT implied lower income, hence lower taxes.

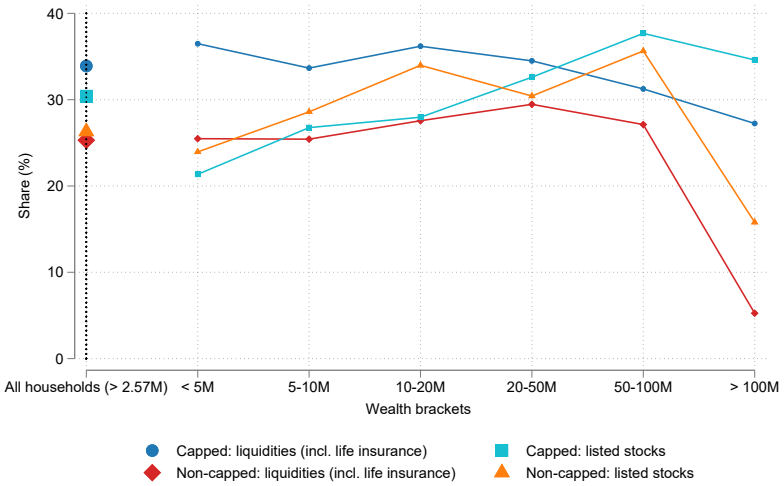
Backup slides

Portfolio composition of capped and non-capped wealth taxpayers, assets $>$ 100**M**



- The same holds when focusing on very wealthy households
- In fact, capped households hold significantly **more liquid** wealth

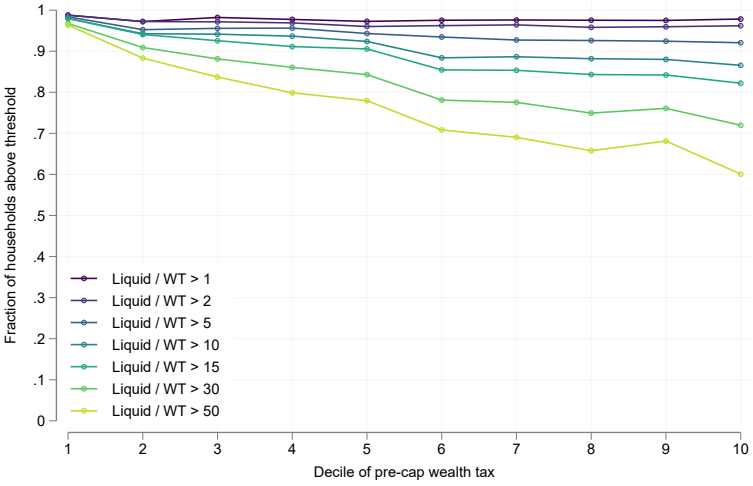
Share of liquid assets in gross wealth of capped and uncapped households



- Capped individuals hold more liquidity and listed securities on average.
- This difference holds true at all wealth levels for liquidity, beyond €20 million in wealth for listed securities.
- Extremely marked differences beyond €100 million.

Distribution of ratio of liquid assets over precap ISF bill

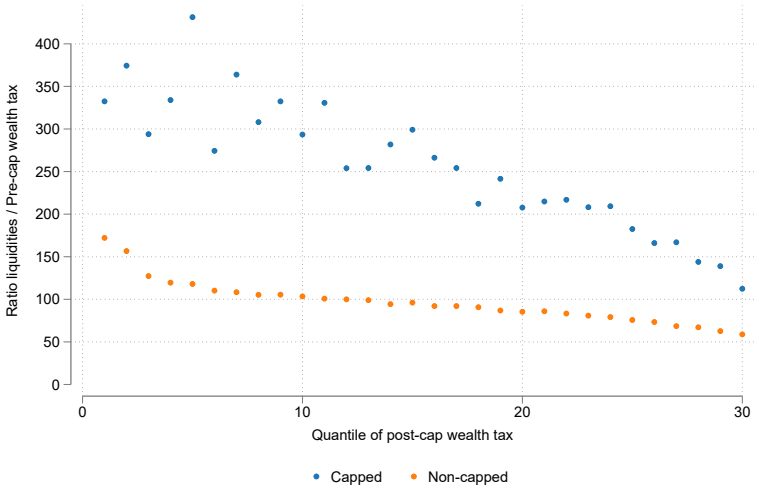
Fraction of households (rked by WT bill) with liquid wealth / wealth tax above different thresholds



- We consider **the wealth tax before applying the capping** among capped households.
- Coverage (liquidities/tax) is similar for capped/non capped
- Average coverage by bin is typically very high ($>$ 50 years)

Ratio of liquid assets over annual ISF bill (after capping)

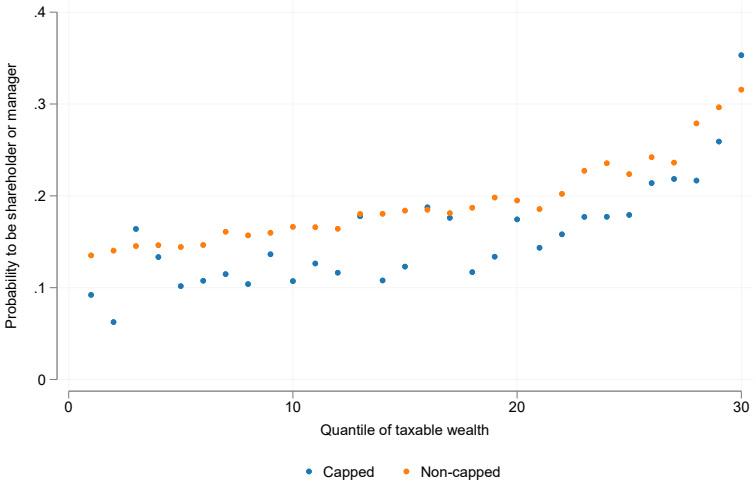
Households ranked by size of ISF bill



- The capped households have between 100 and 350 years of **effective ISF** in liquid assets.
- This is still higher than the number of years of effective ISF held by non-taxpayers.

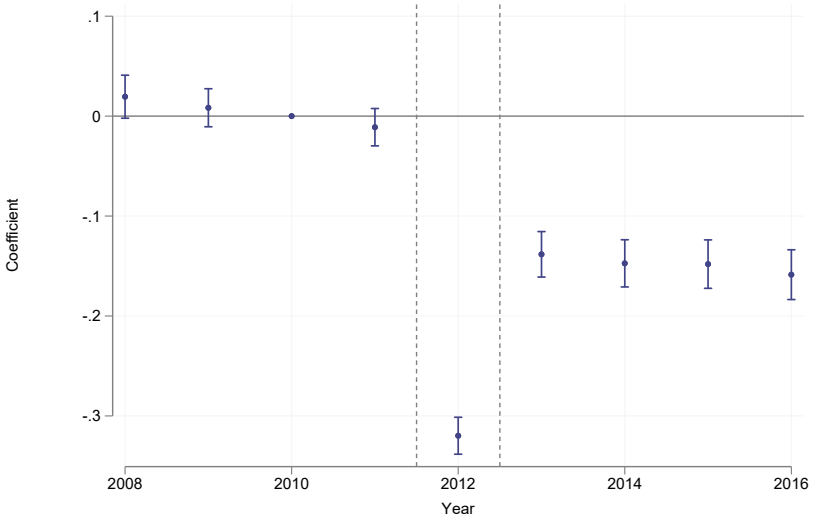
Probability to be shareholder or manager of a company

Households ranked by taxable wealth

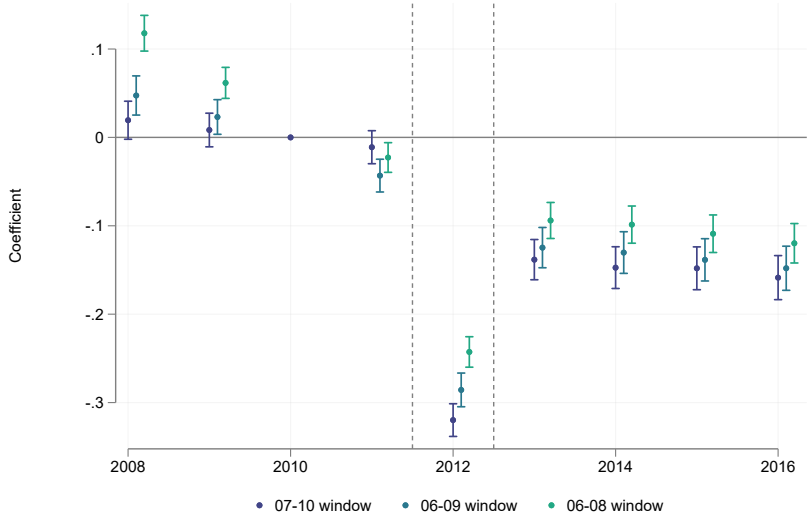


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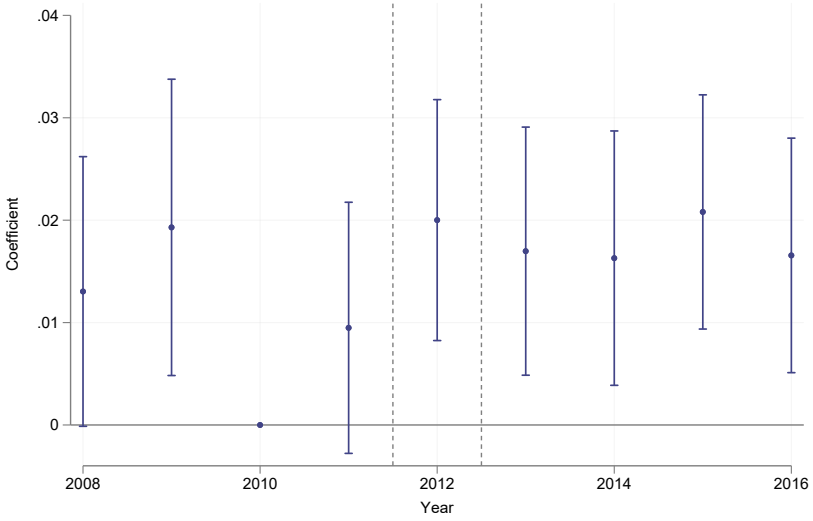
Large gap between treated and control groups on proba of being capped in 2012



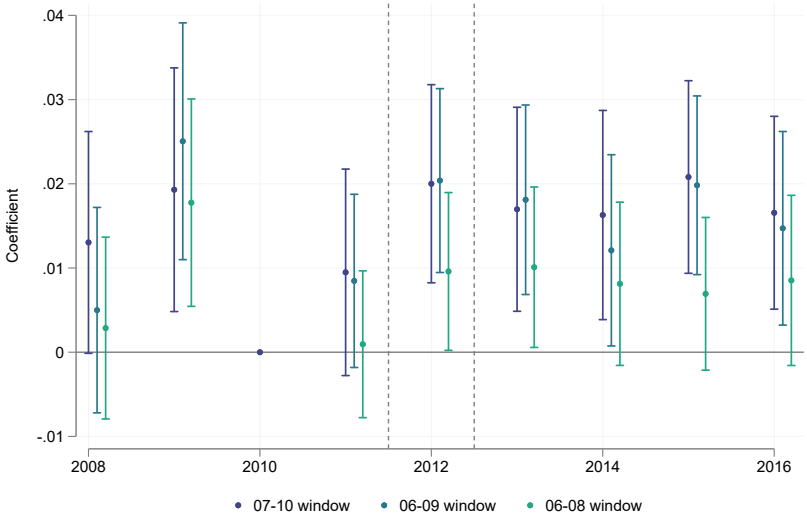
Mean reversion check for proba of being capped in 2012



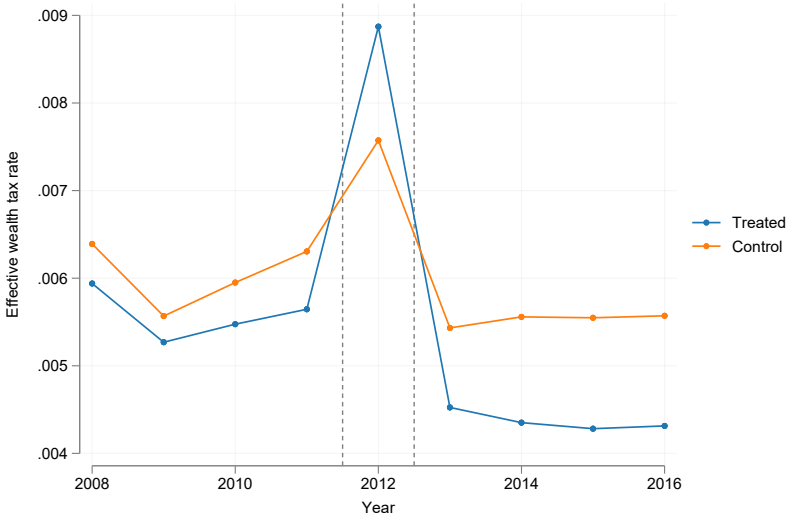
No gap between treated and control groups on wealth returns in 2012



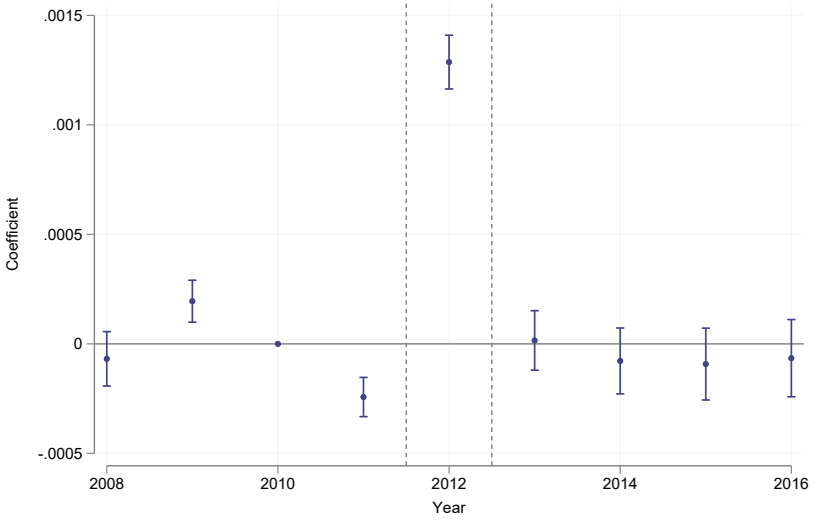
Mean reversion check for wealth returns in 2012



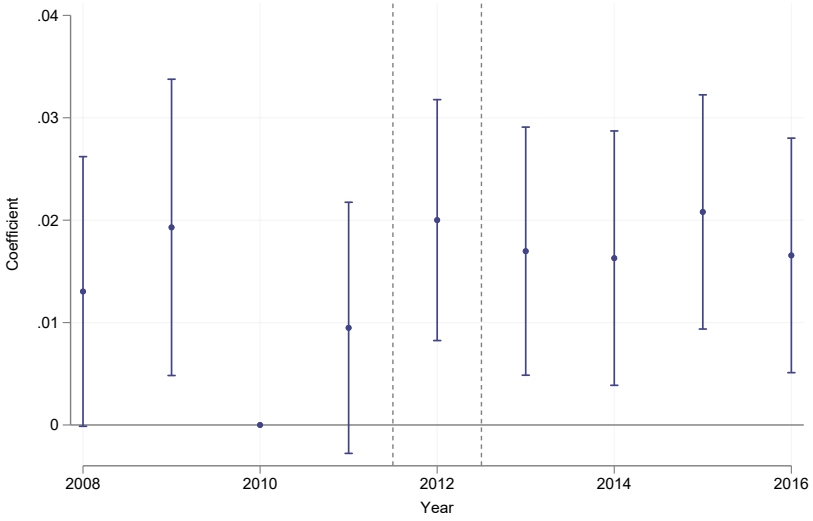
Increase in effective wealth tax rate of treated group vs control



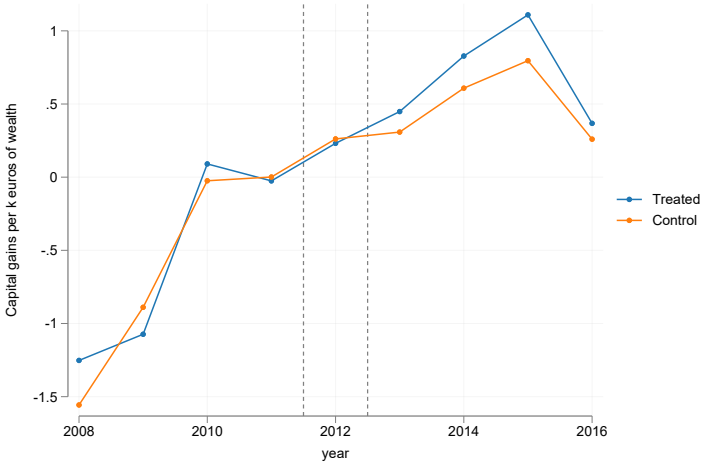
Increase in effective wealth tax rate of treated group vs control



No significant gap in wealth growth for "un-capped" households in 2012-2013



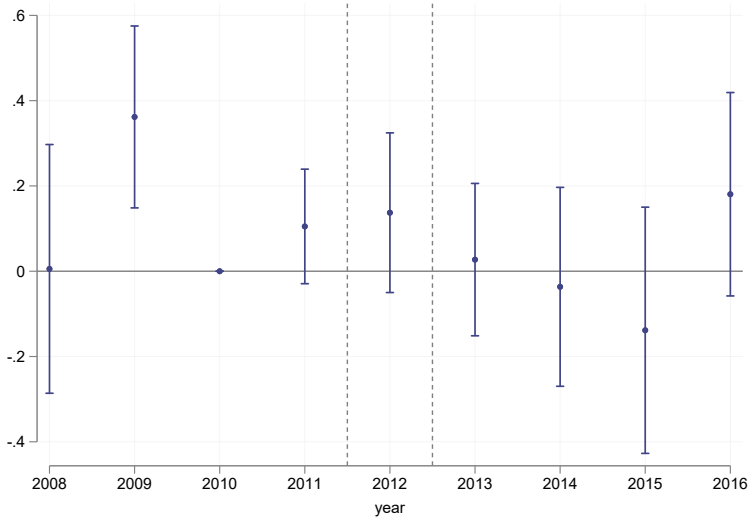
No significant gap in capital gains for "capped" households in 2012-2013



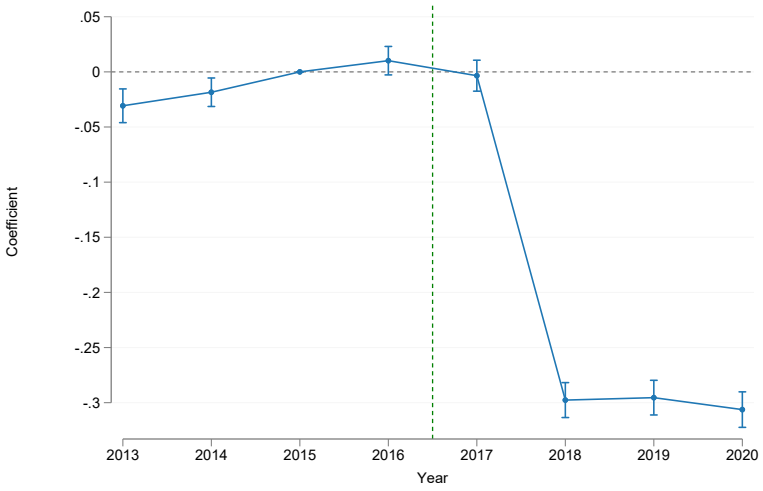
No difference in 2012, some in 2013 but not significant.

K gains regression

No significant gap in capital gains for "un-capped" households in 2012-2013

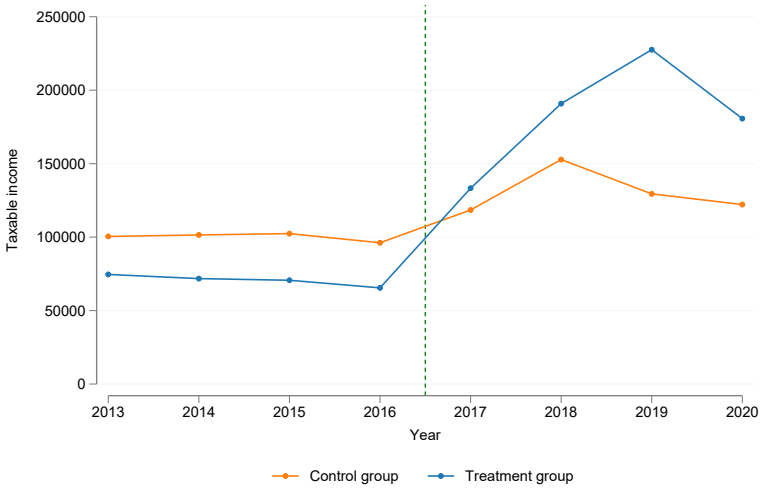


Probability of being capped each year, by group



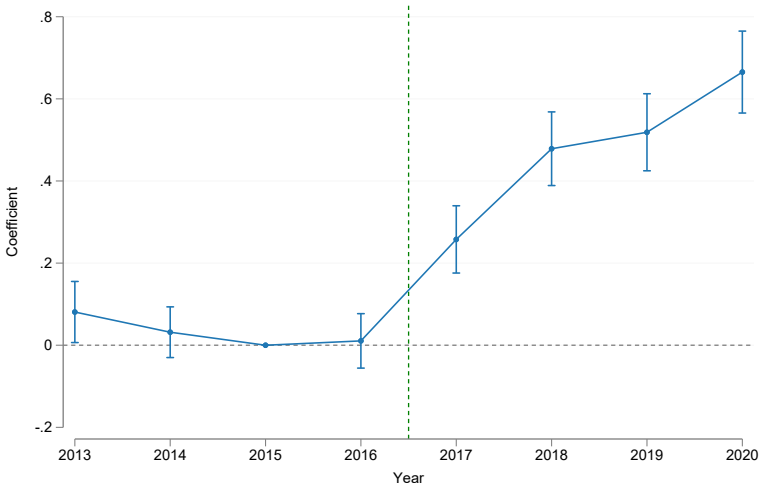
- Differential effect between groups of 30 percentage points in the probability of being capped.
- Controls for vingtiles of wealth x year, decile of age x year, departement x year, # shares x year.

Absolute level of taxable income, by group



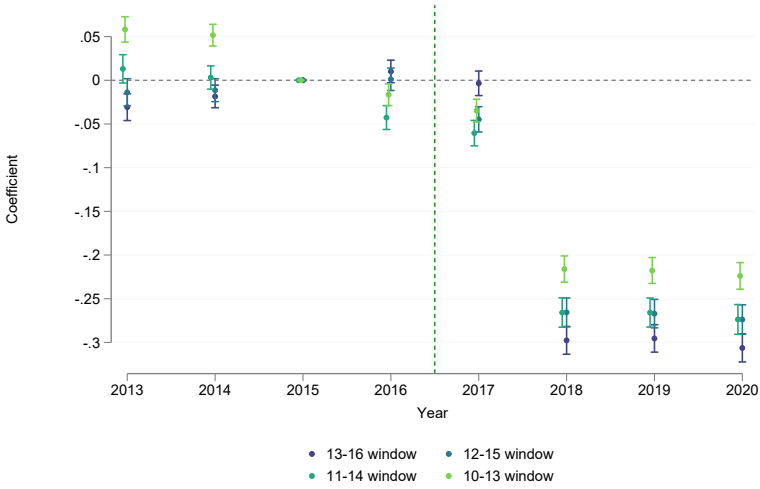
- a near tripling in absolute value of declared income

Log of taxable income, regression coefficients



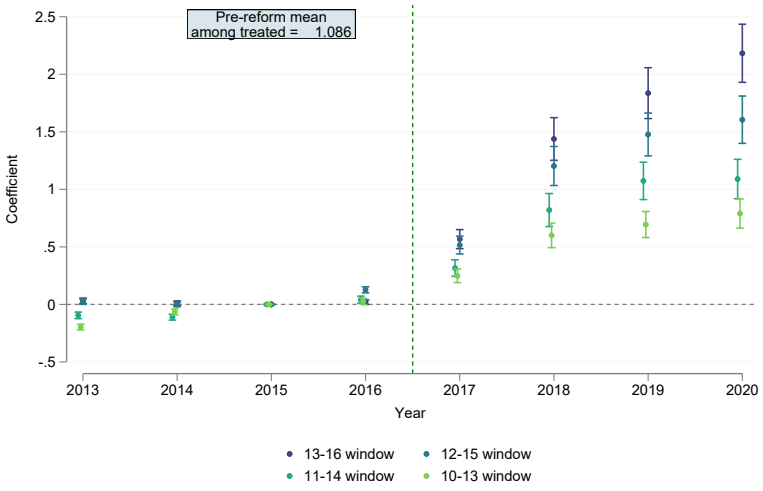
- a 50 log points increase in taxable income
- Implied ETI = 1.7

Changing time window used to build treatment: First stage



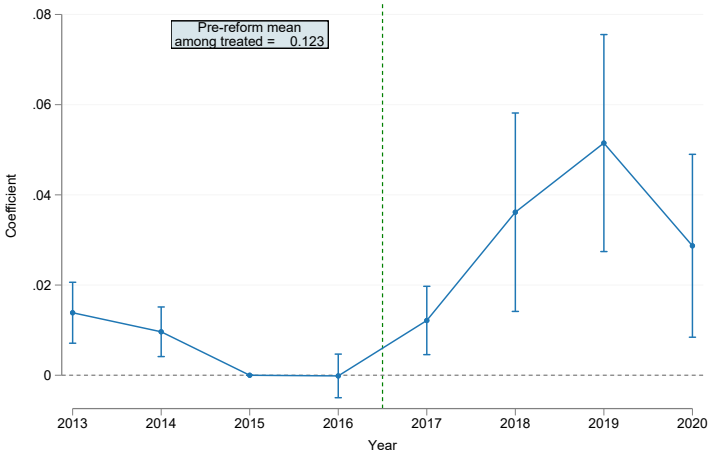
- First stage is not very sensitive to time-window used

Changing time window used to build treatment: Taxable income

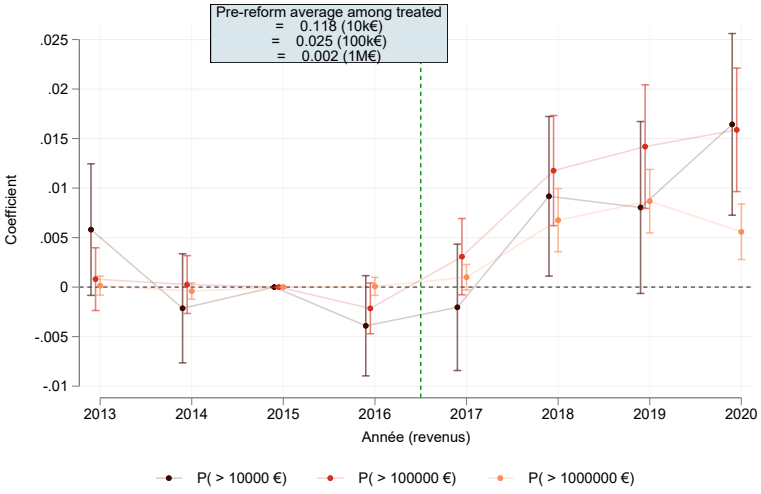


- Very large income responses whatever the time-window we use

Dividends divided by average pre-reform taxable income each year, by group

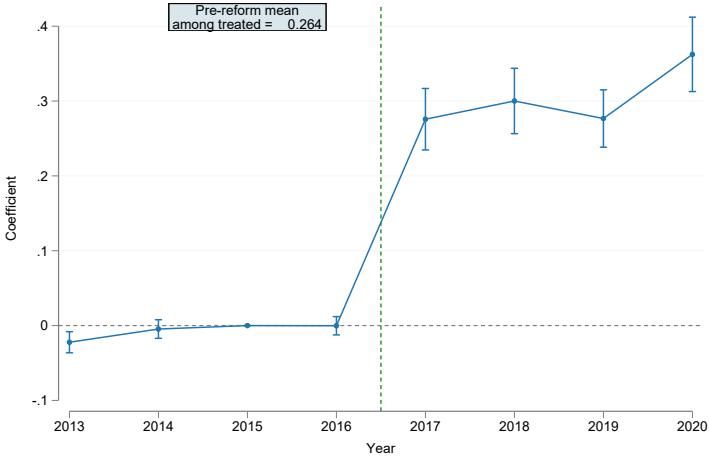


Dividends relative to average pre-reform taxable income, distributional regression coefficients

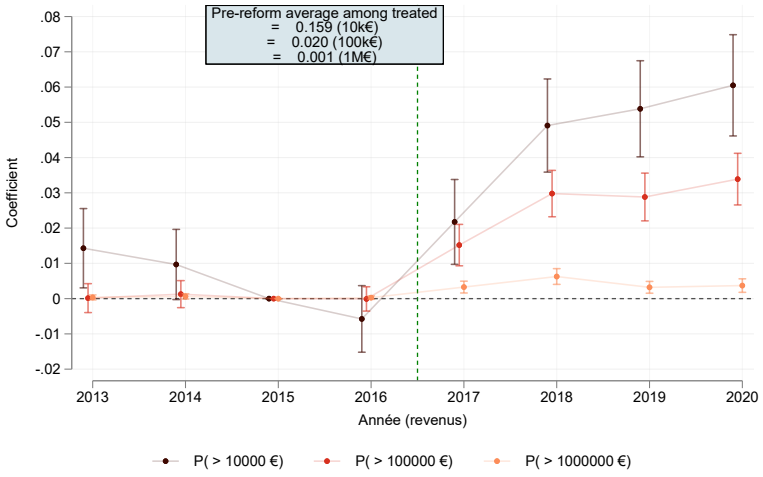


- Tripling of the probability of receiving more than €1 million in dividends.

Life insurance income compared with average pre-reform taxable income, by group



Life insurance income compared to average pre-reform taxable income, distributional regression coefficients



- Probability of receiving more than 100k€ of life insurance income: $\times$ 2.5.