

Appendix (for Online Publication)

A Additional Figures and Tables

Figure A.1: Reporting requirements: Simplified versus Detailed reporting

Detailed reporting

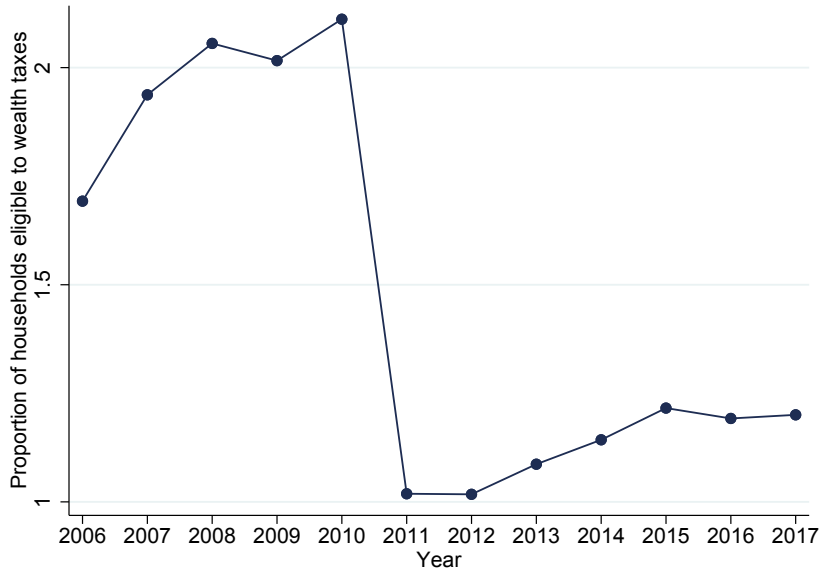
Simplified reporting

DÉTERMINATION DE LA BASE IMPOSABLE			
Le symbole (:) signifie que vous devez fournir une justification			
1 ACTIF BRUT			
IMMEUBILES BÂTIS			
Annexe 1: nombre de feuilles.....	AB		
Bâtiments principaux.....	AB		
Autres immeubles.....	AC		
IMMEUBILES NON BÂTIS, PARTS DE GROUPEMENTS FORESTIERS OU FONCIERS			
Annexe 2: nombre de feuilles.....			
Bois, forêts et parts de groupements forestiers (:).....	BD	-25% =	BE
Biens ruraux loués à long terme.....	BF		
• dont montant dans la limite de 101 807 €.....		-25% =	BF
• dont montant pour la fraction supérieure à 101 807 €.....		-50% =	BG
Parts de Groupements Fonctions Agricoles et de Groupements Agricoles Fonctions.....	BI		
• dont montant dans la limite de 101 807 €.....		-25% =	BI
• dont montant pour la fraction supérieure à 101 807 €.....		-50% =	BI
Autres biens.....	BC		
DROITS SOCIAUX – VALEURS MOBILIÈRES – LIQUIDITÉS – AUTRES MEUBLES			
Annexes 3.1 et 3.2: nombre de feuilles.....			
Parts ou actions détenues par les salariés et mandataires sociaux.....	CH	-25% =	CH
Parts ou actions de sociétés avec engagement de conservation de 6 ans minimum (:).....	CI	-25% =	CI
Droits sociaux de sociétés dans lesquelles vous exercez une fonction ou une activité.....	CO		
Autres valeurs mobilières.....	CG		
Liquidités.....	CF		
Autres biens meubles (voir section d'assurance-vie) (CO).....	CG		
Montant des mandataires détenus aux droits et titres et des autres:			
• Droits sociaux détenus à la suite d'un rachat d'entreprise par les salariés.....	CH		
• Droits sociaux détenus par le foyer fiscal dans une société interposée.....	CI		
• Droits sociaux constituant plus de 50 % du patrimoine.....	CI		
• Titres ou parts de FCP ou FCPN reçus en contrepartie de la souscription au capital d'une PME.....	CF		
TOTAL DES IMMEUBILES ET DES BIENS MEUBLES.....	AB + AC + BE + BF + BG + BI + BJ + BK + CH + CI + CG + CO		DE
Forfait mobilier (voir section meubles) sur lequel ont été appliqués le régime de l'article 64 de la Loi C-96, l'article 410 ¹ , ainsi que l'article 206 de la Loi C-96.....			DF
TOTAL DE L'ACTIF BRUT.....			DE + DF = FG
2 PASSIF ET AUTRES DÉDUCTIONS			
Annexe 4: nombre de feuilles.....			
TOTAL DU PASSIF ET AUTRES DÉDUCTIONS (:).....	GH		
3 ACTIF NET IMPOSABLE			
BASE IMPOSABLE.....	FG - GH =		HI

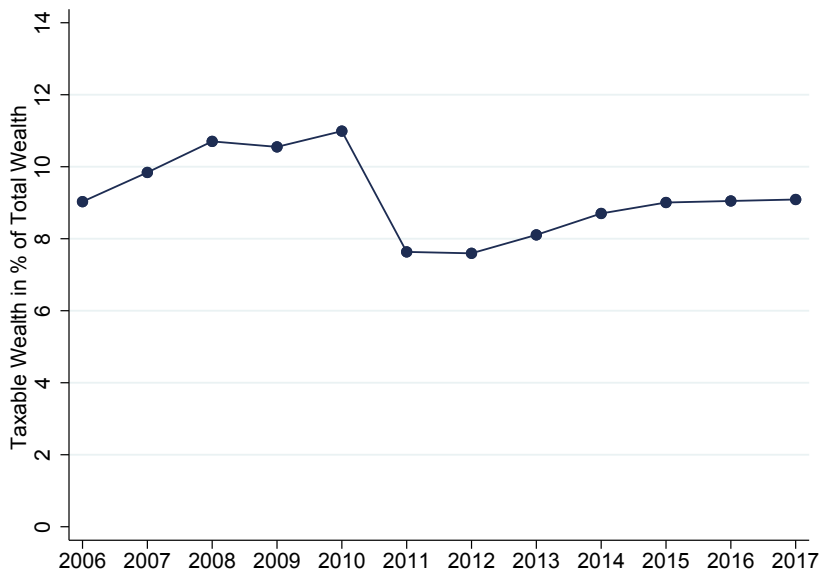
IMPÔT DE SOLIDARITÉ SUR LA FORTUNE	
Base nette imposable pour un patrimoine ou l'1.2013 supérieur à 1 300 000 € et inférieur à 2 570 000 €.....	980
Valeur brute du patrimoine.....	990

Figure A.2: Wealth Tax Base in France

A. Taxpayers Subject to the Wealth Tax

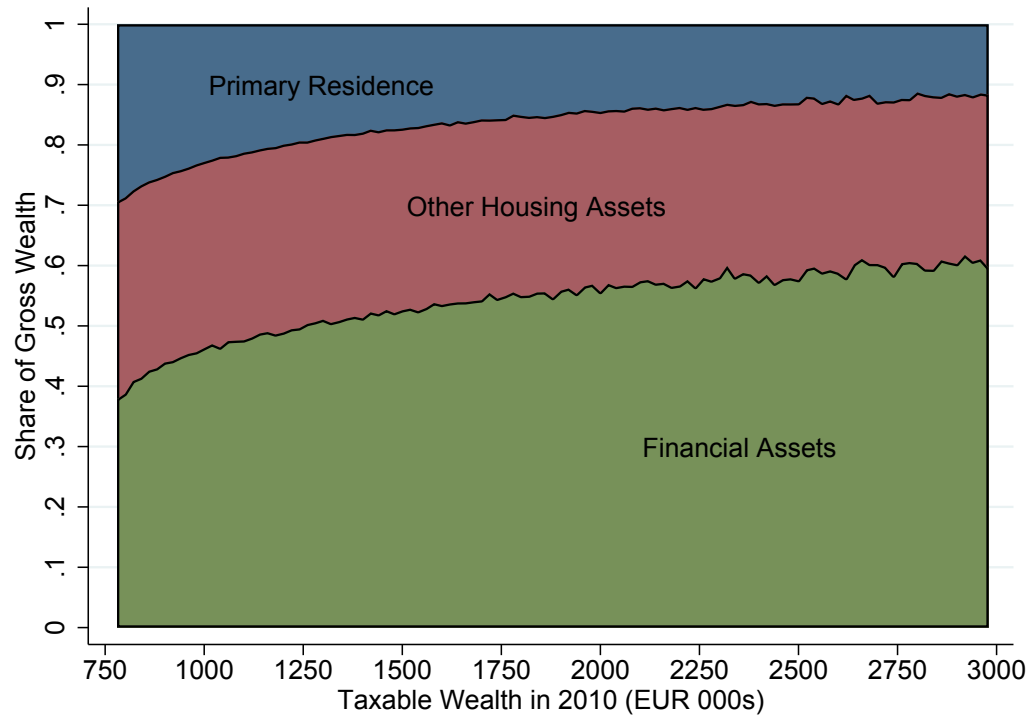


B. Taxable Wealth



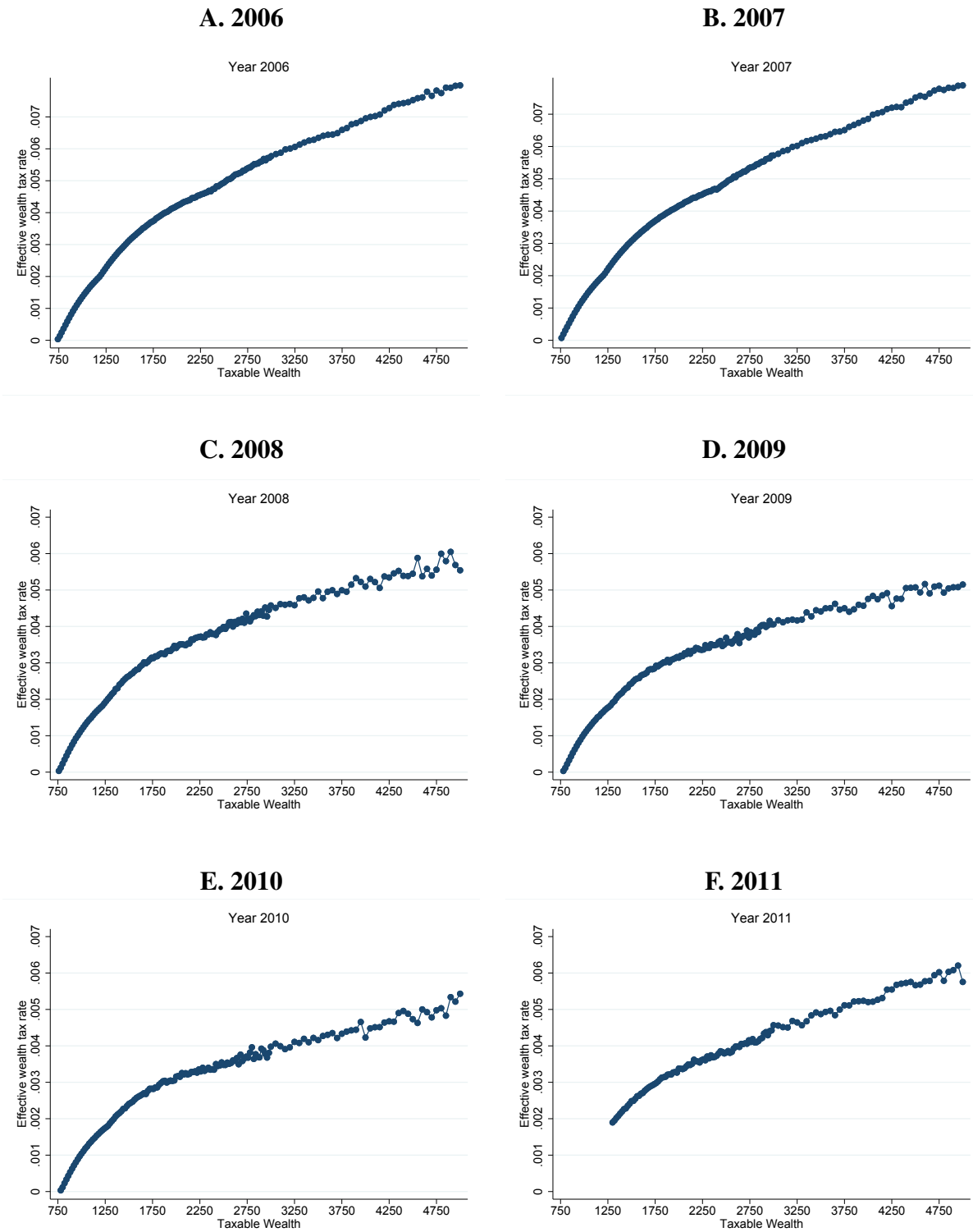
Notes: This figure shows the evolution of the share of taxpayers liable to the wealth tax in France (top panel) and the evolution of taxable wealth over total wealth (bottom panel). In 2011, the French government increased the exemption threshold from 800K to 1,300K.

Figure A.3: **Composition of Gross Taxable Wealth in 2010**



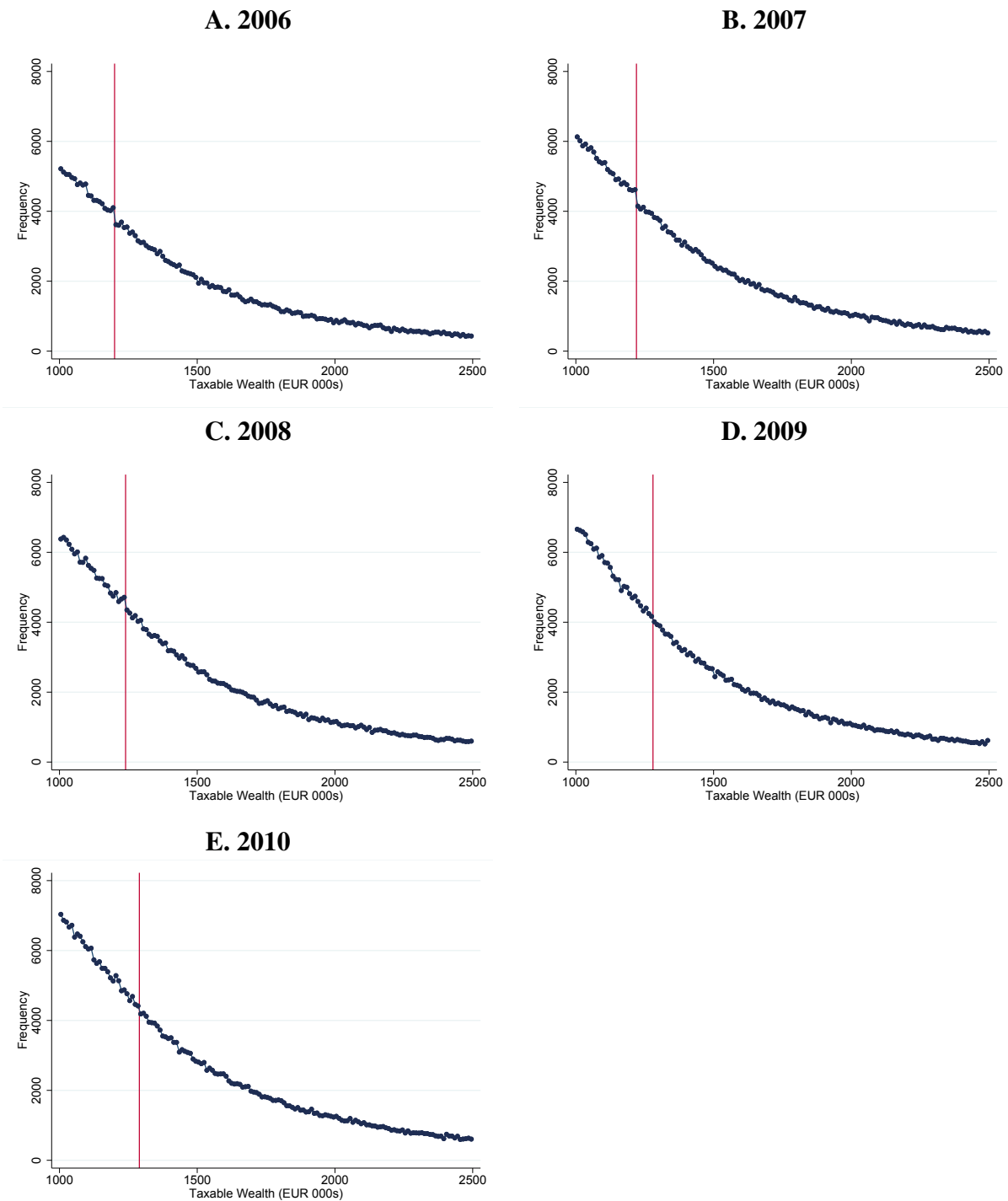
Notes: This figure describes the composition of gross taxable wealth (i.e., gross assets) in 2010 by level of net taxable wealth.

Figure A.4: Effective wealth tax rates



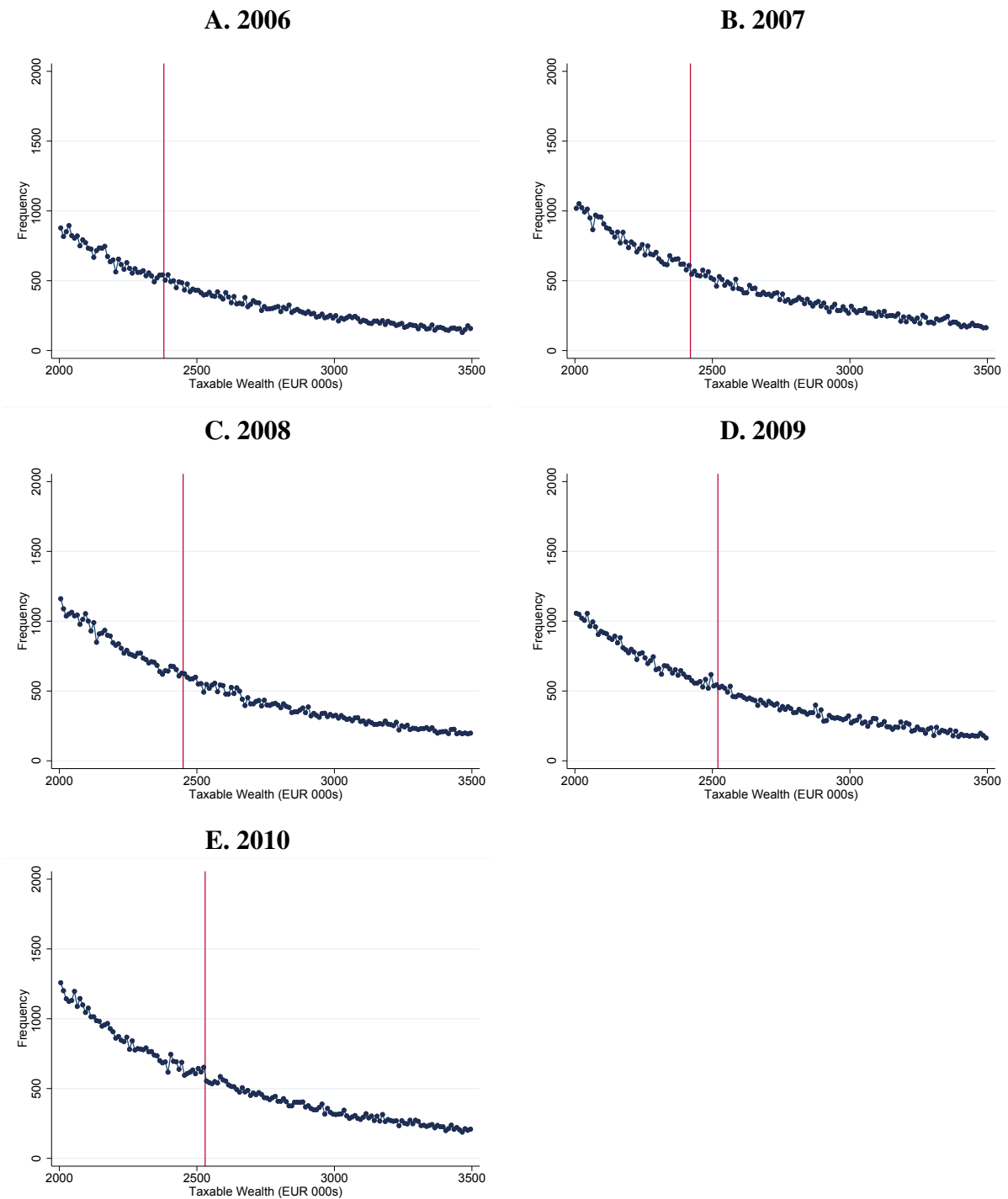
Notes: This figure shows the effective wealth tax rates in France for the period 2006-2011. Taxable wealth expressed in thousands of euros.

Figure A.5: Distribution of Wealth at the Second MTR Threshold



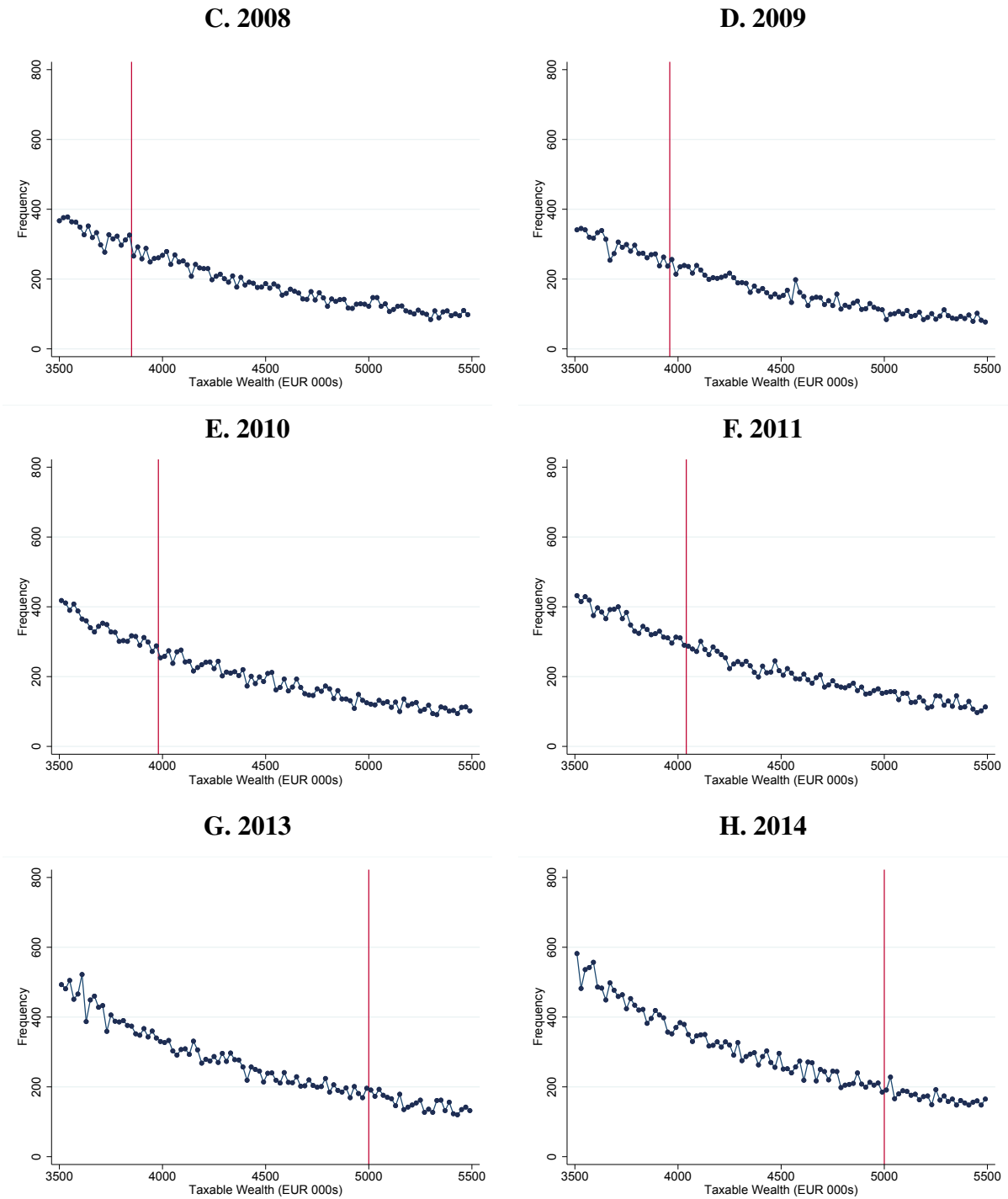
Notes: This figure shows the distribution of taxpayers by level of net taxable wealth around the second wealth tax bracket threshold for the period 2006-2010.

Figure A.6: **Distribution of Wealth at the Third MTR Threshold**



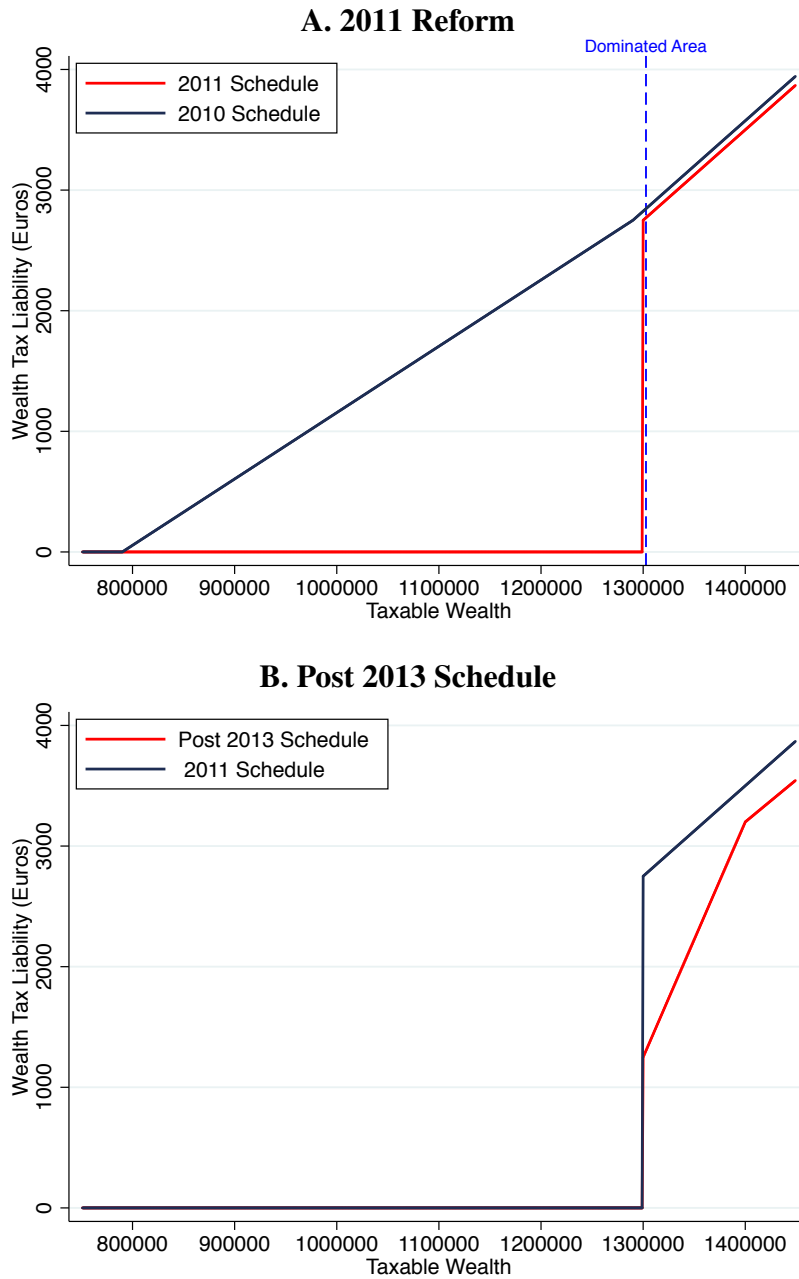
Notes: This figure shows the distribution of net taxable wealth around the third wealth tax bracket threshold for the period 2006-2010.

Figure A.7: Distribution of Wealth at the 4th MTR Threshold



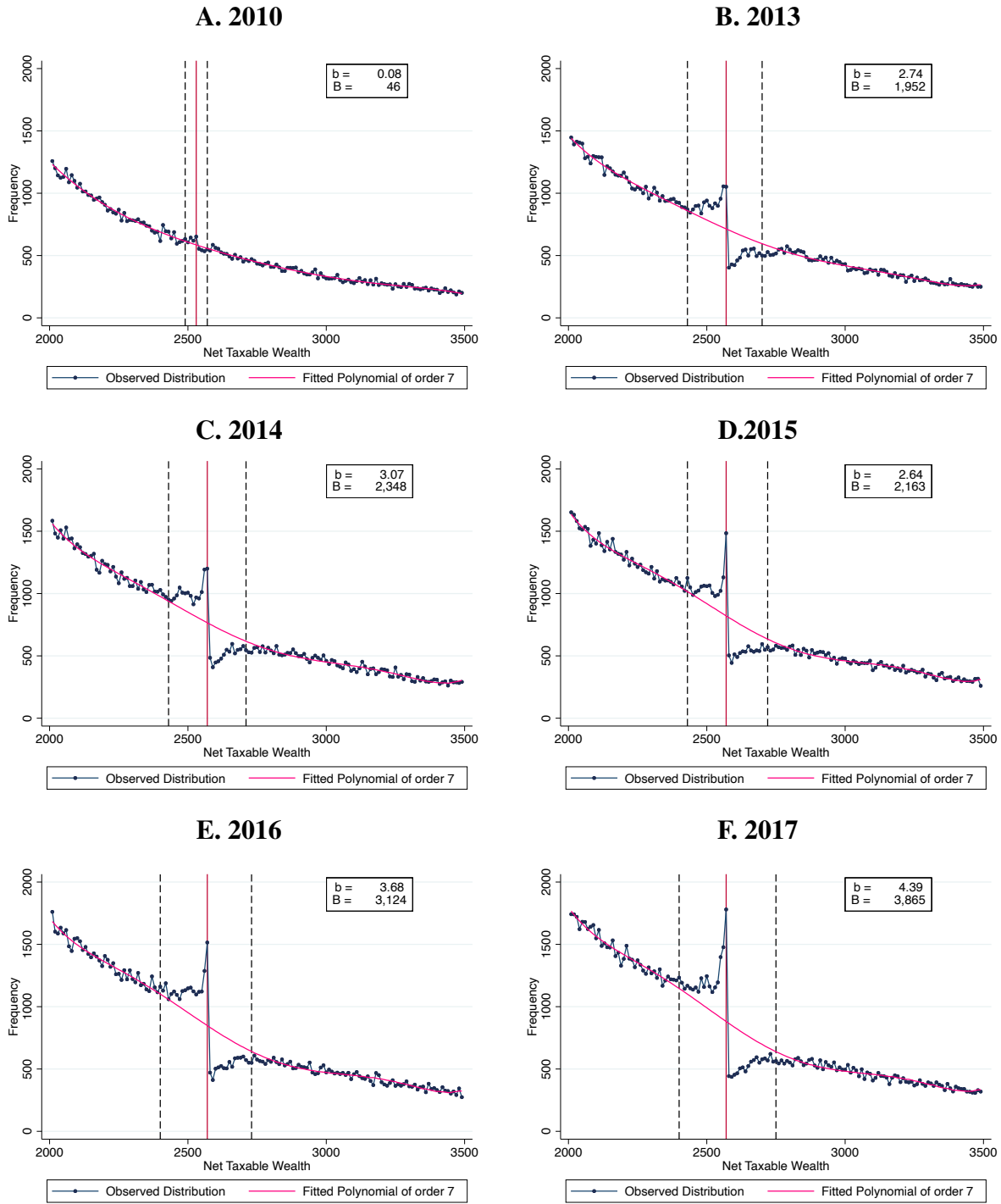
Notes: This figure shows the distribution of net taxable wealth around the fourth wealth tax bracket threshold for the period 2008-2014.

Figure A.8: Large Change in Exemption Threshold



Notes: This figure describes the wealth tax exemption reform of 2011.

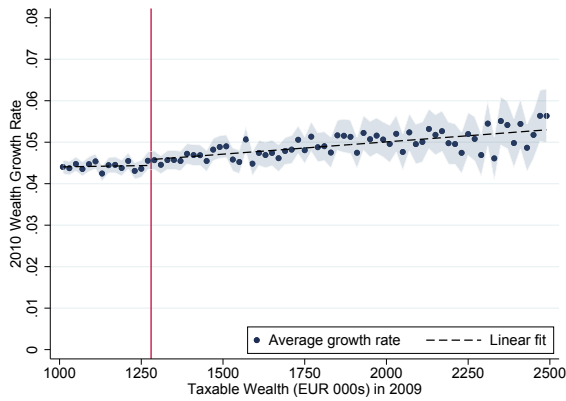
Figure A.9: Excess mass estimates using static bunching



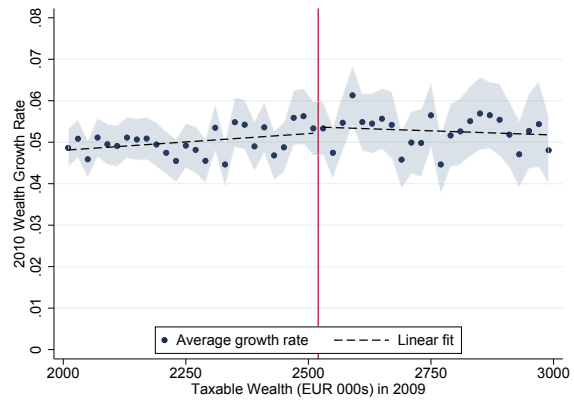
Notes: This figure shows the distribution of taxable wealth in bins of €10,000 of taxable wealth around the third bracket threshold of the French wealth tax, for year 2010, and each year between 2013 and 2017. In 2010, the threshold was 2,530K and was associated with a kink in the wealth tax schedule. From 2013 to 2017, the threshold was 2,570K and was associated with a kink in the wealth tax schedule and a change in reporting requirements (notch). We plot the observed distribution in blue and an estimate of the counterfactual distribution absent the kink in pink. The counterfactual is obtained by fitting a 7th-order polynomial to the observed distribution, excluding a segment that we determine following the standard bunching methodology detailed in Appendix C. The bunching estimate b equals excess mass at the kink (B), scaled by the height of the counterfactual distribution at the kink.

Figure A.10: Behavioral Responses to Marginal Tax Rates, Wealth Growth Rates

A. $\Delta\tau$ of 0.2 pp at 1,290K



B. $\Delta\tau$ of 0.25pp at 2,530K



C. $\Delta\tau$ of 0.3pp at 3,980K



D. $\Delta\tau$ of 0.35pp at 7,600K

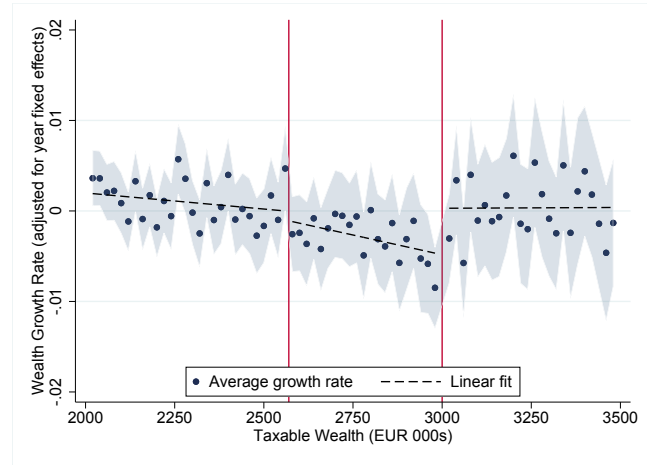
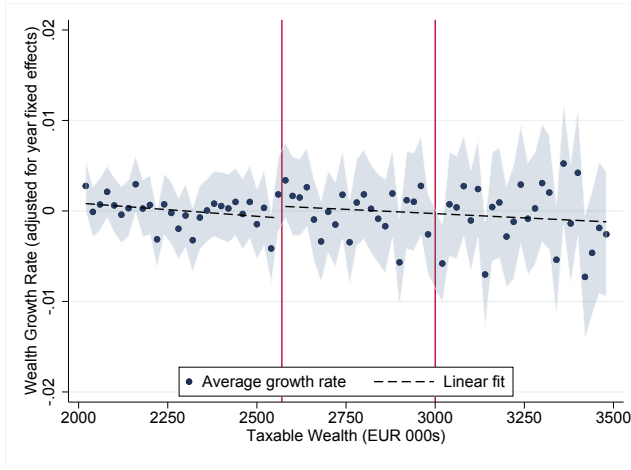


Notes: Notes: This figure shows the pooled distribution of yearly wealth growth rates by individuals' wealth bin over the period. We plot the average wealth growth rate by taxable wealth bin around the marginal tax rate thresholds depicted by the vertical line in each figure. We fit a linear model below and above the cut-off that is depicted by the fitted dashed black line. In each figure, we group households into bins of €10,000 of taxable wealth for Panel A and B, €20,000 in Panel C and €50,000 in Panel D. The shaded area depicts 95% confidence intervals.

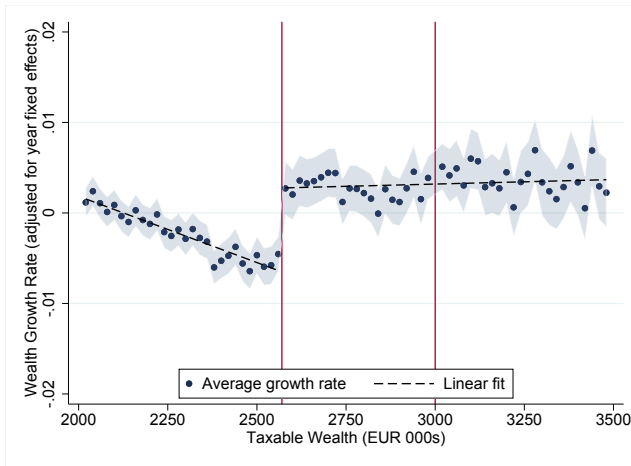
Figure A.11: Wealth Growth Rates Adjusted for Years Fixed Effects

A. No Simplification Threshold in 2006-2010

B. Simplification Threshold is 3,000K in 2011-2012



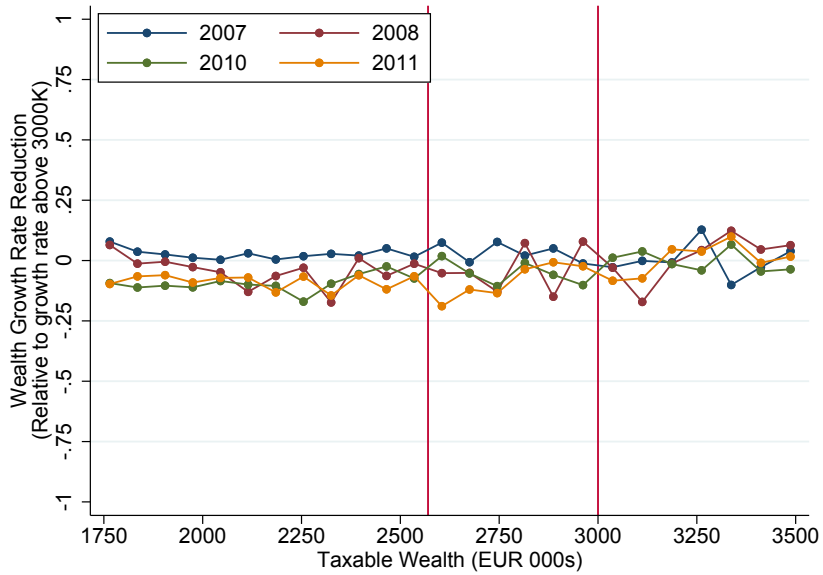
C. Simplification threshold is 2,570K in 2013-2017



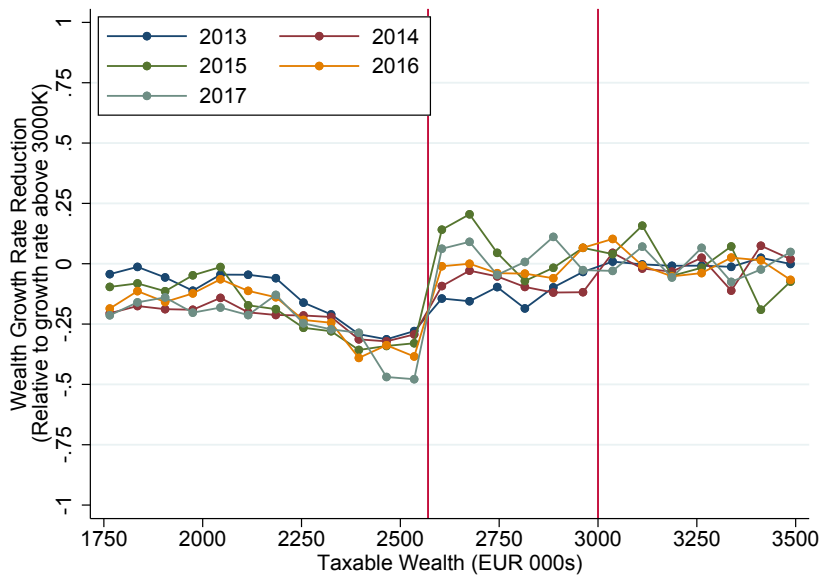
Notes: This figure shows the pooled distribution of yearly wealth growth rates by individuals' wealth bin over the period, after adjusting for year fixed effects. In each figure, we group household into bins of €20,000 of net taxable wealth. We plot the average wealth growth by taxable wealth bin around the simplification thresholds depicted by the vertical line in each figure. We fit a linear model below and above the cut-off that is depicted by the fitted dashed black line. Panel A pools all observations for the pre-simplification period (2006-2010), Panel B pools all observations for the first simplification threshold period (2011-2012) and Panel C pools all observations for the second simplification threshold period (2013-2017). The shaded area depicts 95% confidence intervals.

Figure A.12: Cross-Section of Wealth Growth Rates

A. Before the Introduction of Simplified Return

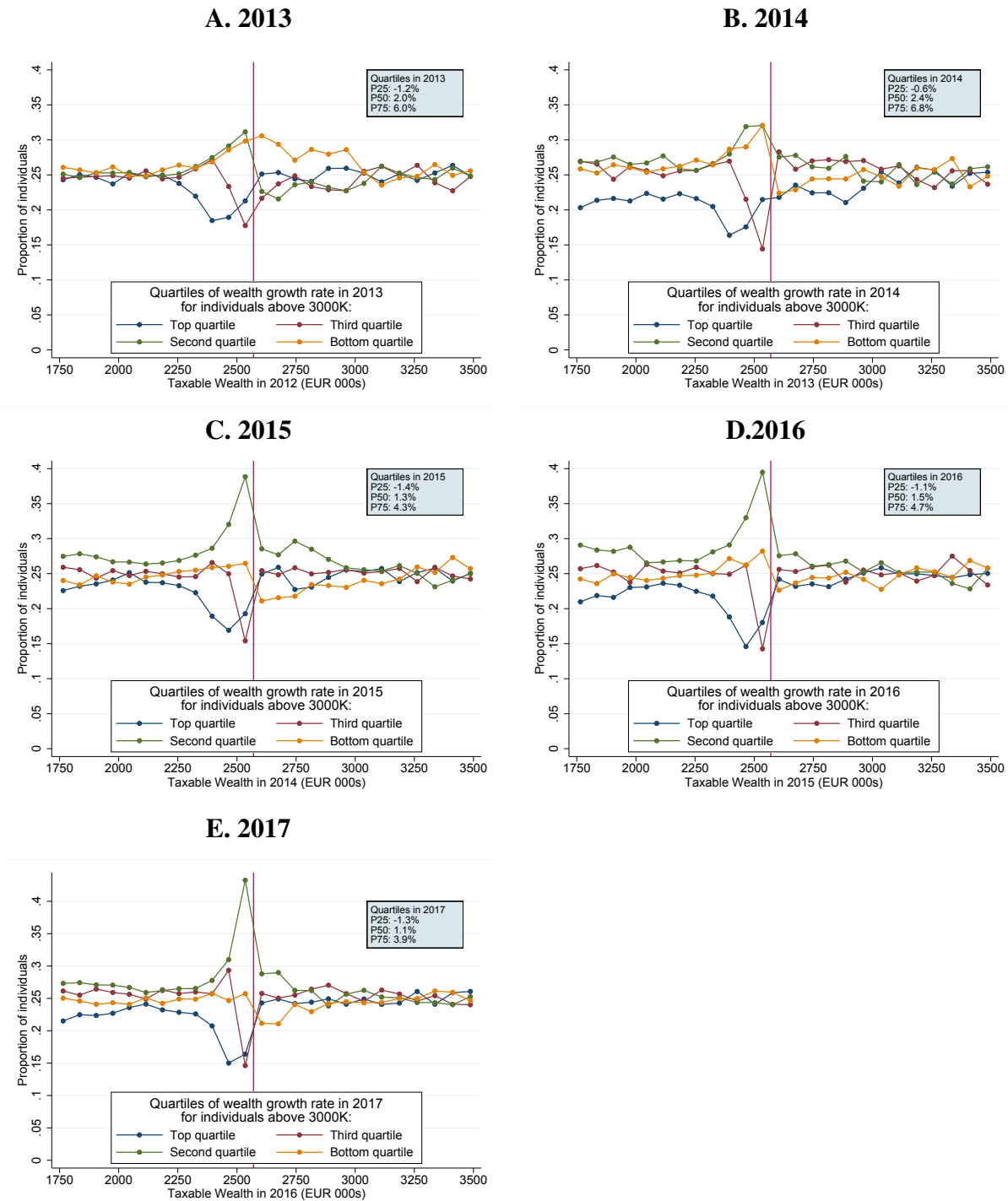


B. Simplification threshold is 2,570K in 2013-2017



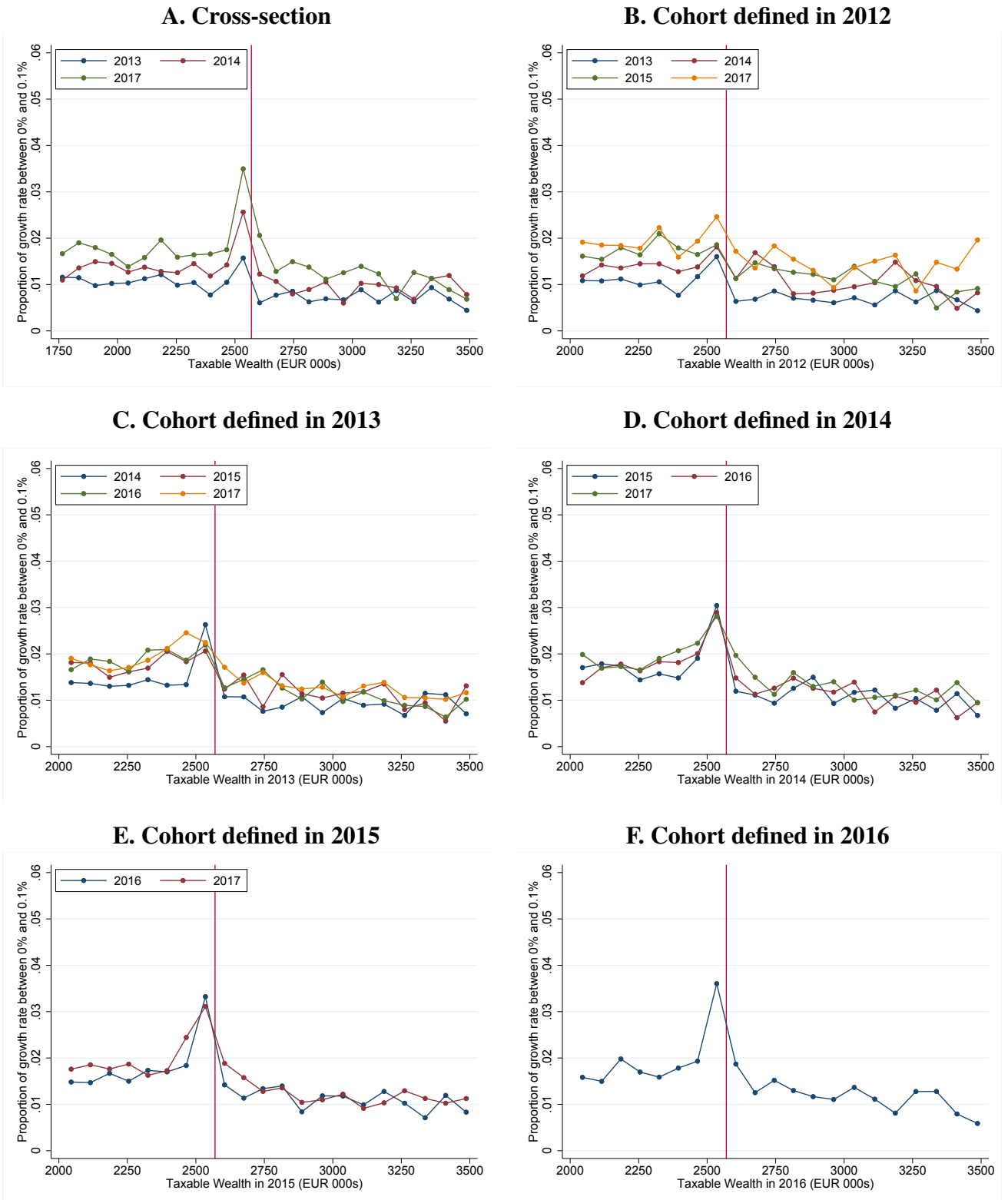
Notes: This figure shows wealth growth rate reduction by 70K bins of taxable wealth each year. For each bin, we compute the wealth growth rates reduction relative to the average growth rate of taxpayers between 3,000K and 3,500K in the same year. The two vertical red lines denote the simplification thresholds in place during the period 2011-2017.

Figure A.13: Share of Taxpayers by Quartile of Wealth Growth Rates



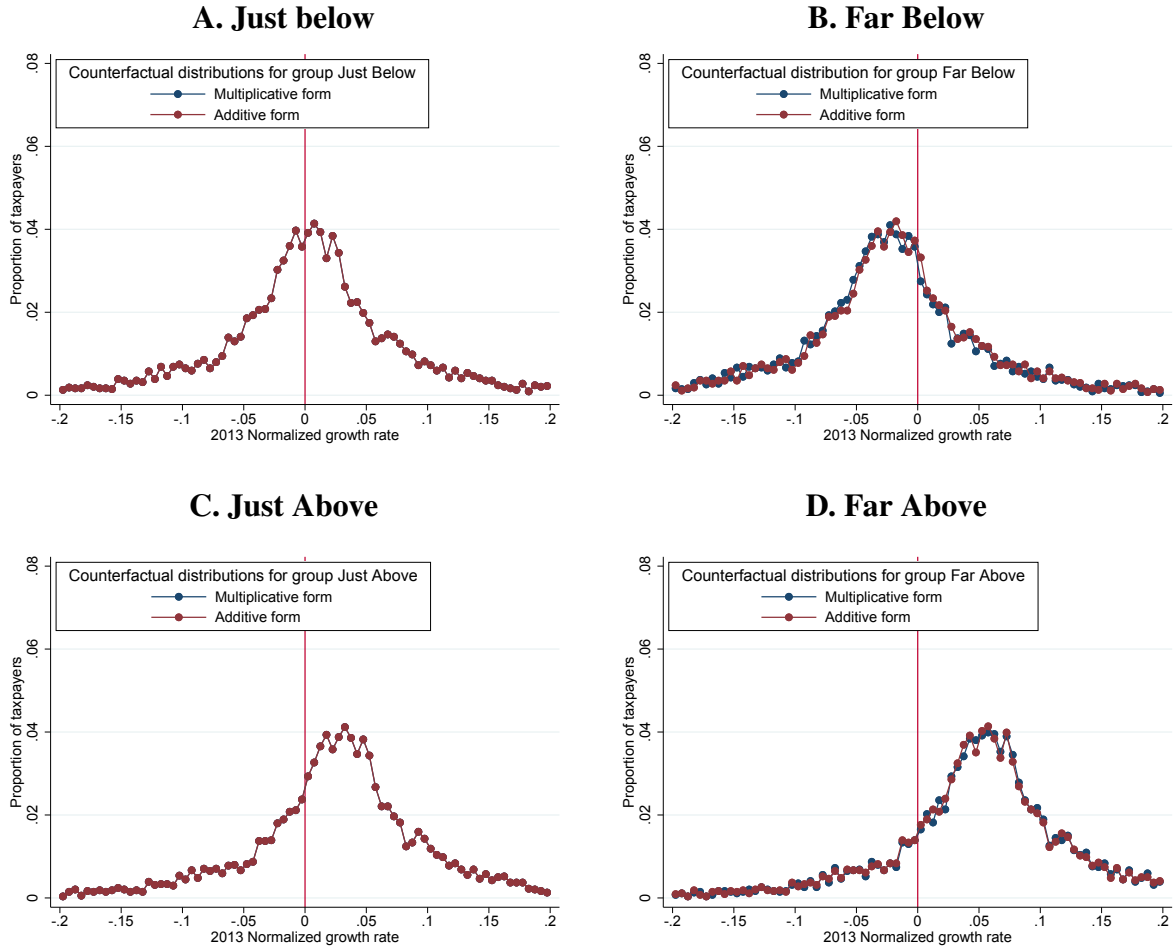
Notes: This figures shows how the distribution of wealth growth is distorted around the 2570K threshold. For each year, the quartile thresholds are computed based on the distribution of growth rates of taxpayers with wealth between €3.0 and €3.5 million euros (unaffected by the reform). By definition, the share of taxpayers in each quartile is 25% for taxpayers between €3.0 and €3.5 million. For bins of wealth below €3.0 million euros, a proportion below 25% indicates there is a missing portion of taxpayers in the growth rate distribution for that range. Conversely, if more than 25% of taxpayers fall in a given quartile, there is an excess portion of taxpayers in the growth rate distribution for that range.

Figure A.14: Proportion of taxpayers with 0 growth rate by cohort over time



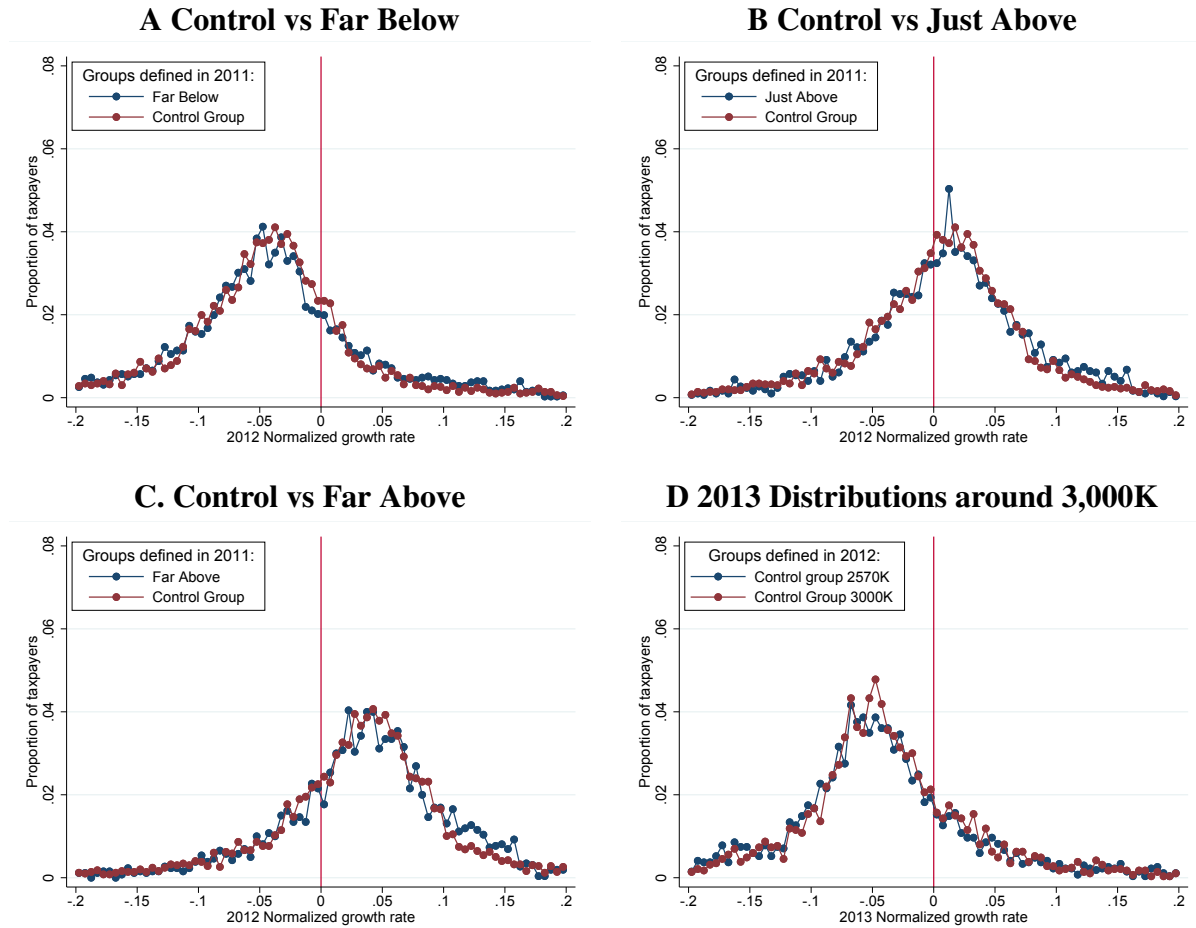
Notes: This figure shows the share of taxpayers experiencing a wealth growth rate between 0% and 0.1%, that we call "0 growth rate". Panel A plots the share of taxpayers with 0 growth rate for years 2013, 2014, and 2017 in cross-section. Panels B to E plot the yearly share for taxpayers with 0 growth rate for each cohort defined from 2012 (Panel B) to 2016 (Panel F).

Figure A.15: **Robustness checks on counterfactual distributions: Multiplicative vs. additive forms**



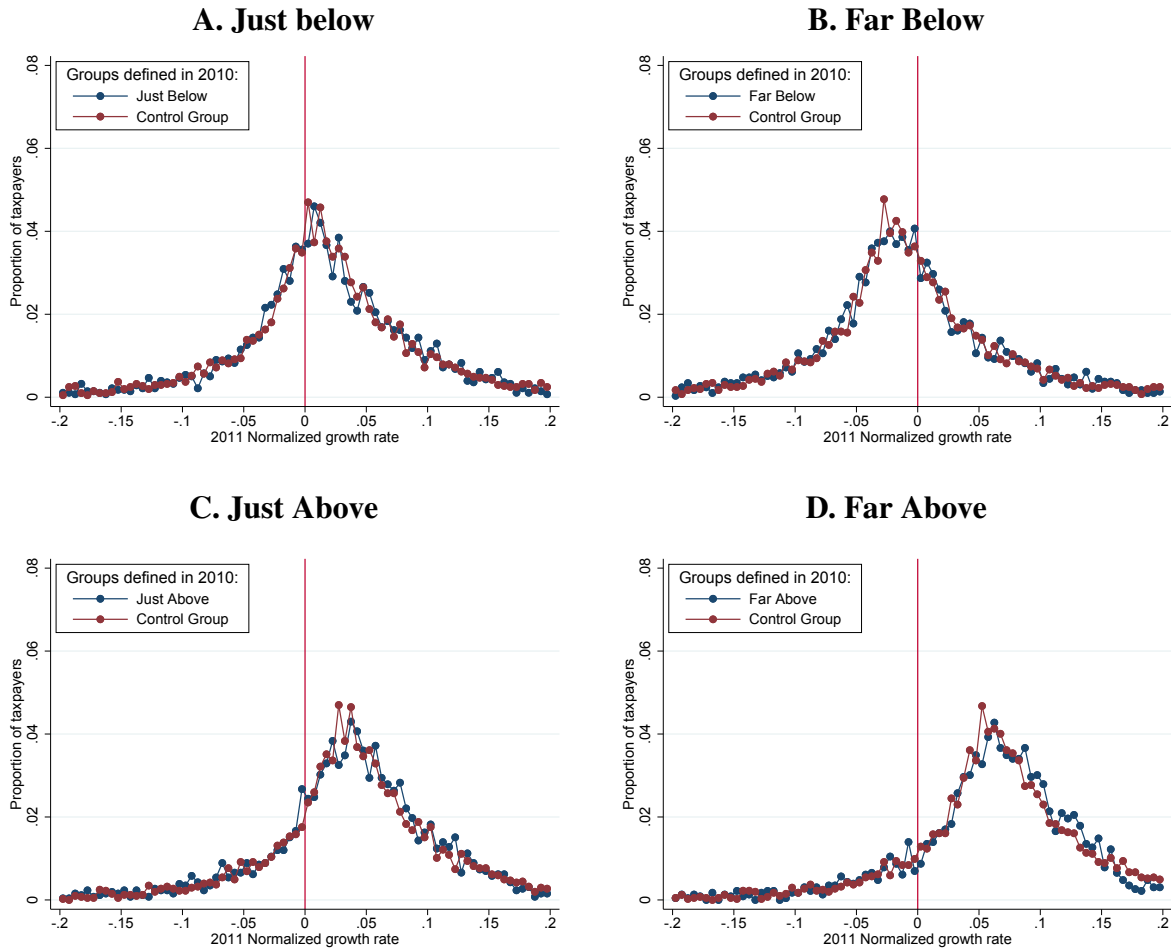
Notes: This figure investigates whether the distribution of normalized growth rates is affected by the type of formula used to compute the placebo threshold (additive (Equation 3) vs. multiplicative (Equation 2) formulas), as described in Section 4.2.2.

Figure A.16: Validation of the identification assumption: Additional tests



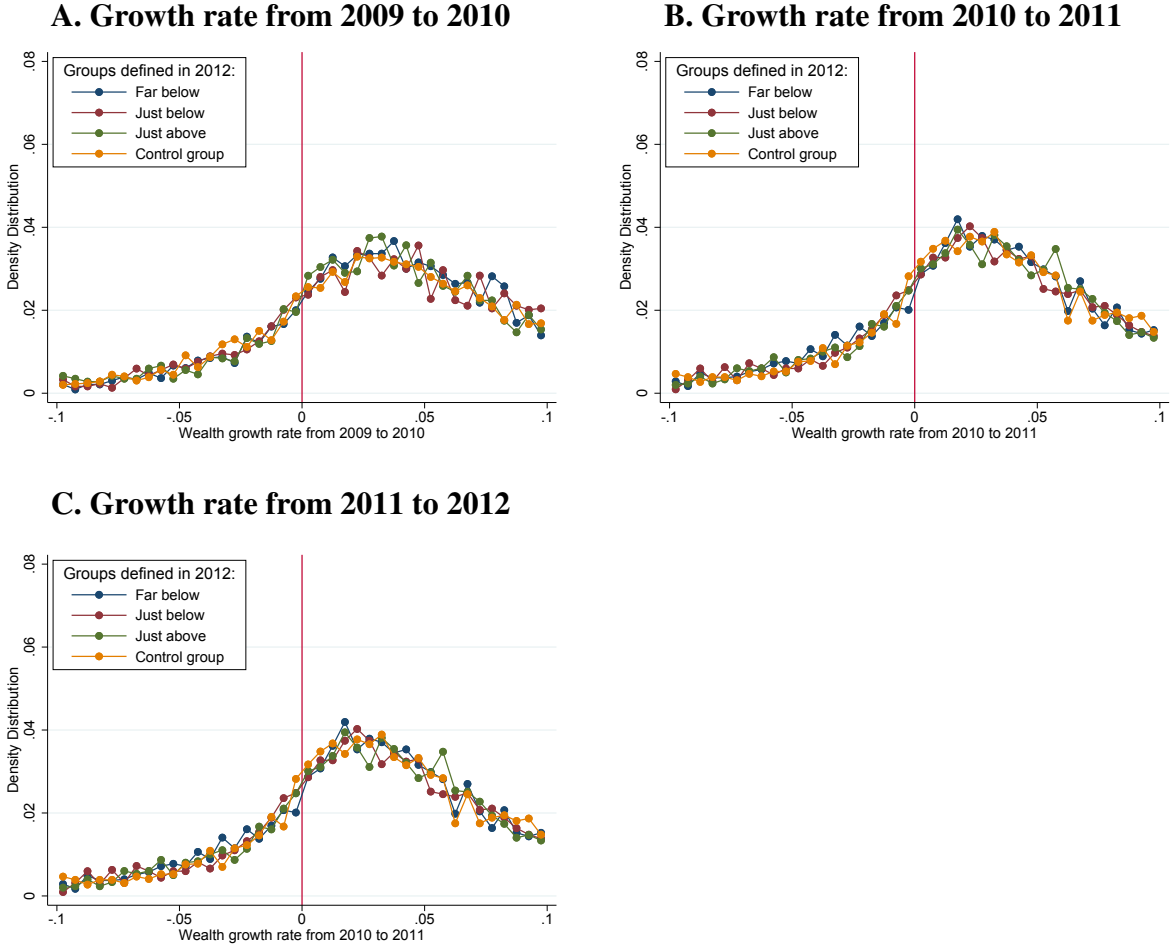
Notes: This figure investigates whether the distribution of normalized growth rates in the control group (taxpayers located in [2710K,2850K] in 2012) is comparable to the distribution of normalized growth rates for other taxpayers (“Far below”, “Just above”, and “Far above”). In Panel A, B, and C, we define our control and treated groups by level of wealth in 2011, and plot their 2012 normalized growth rates as explained in Sections 4.2.1. Panel D investigates whether the control group (defined in 2012) has been affected by the repeal of the simplification threshold at 3,000K in 2013. It compares the distributions of 2013 normalized growth rate at 3000K in the control group ([2710K,2850K]) with the group of individuals far above the 3,000K threshold (“Control Group 3,000K” in [3150K,3225K]).

Figure A.17: **Validation of the identification assumption: Distribution of 2011 normalized growth rates across groups defined in 2010):**



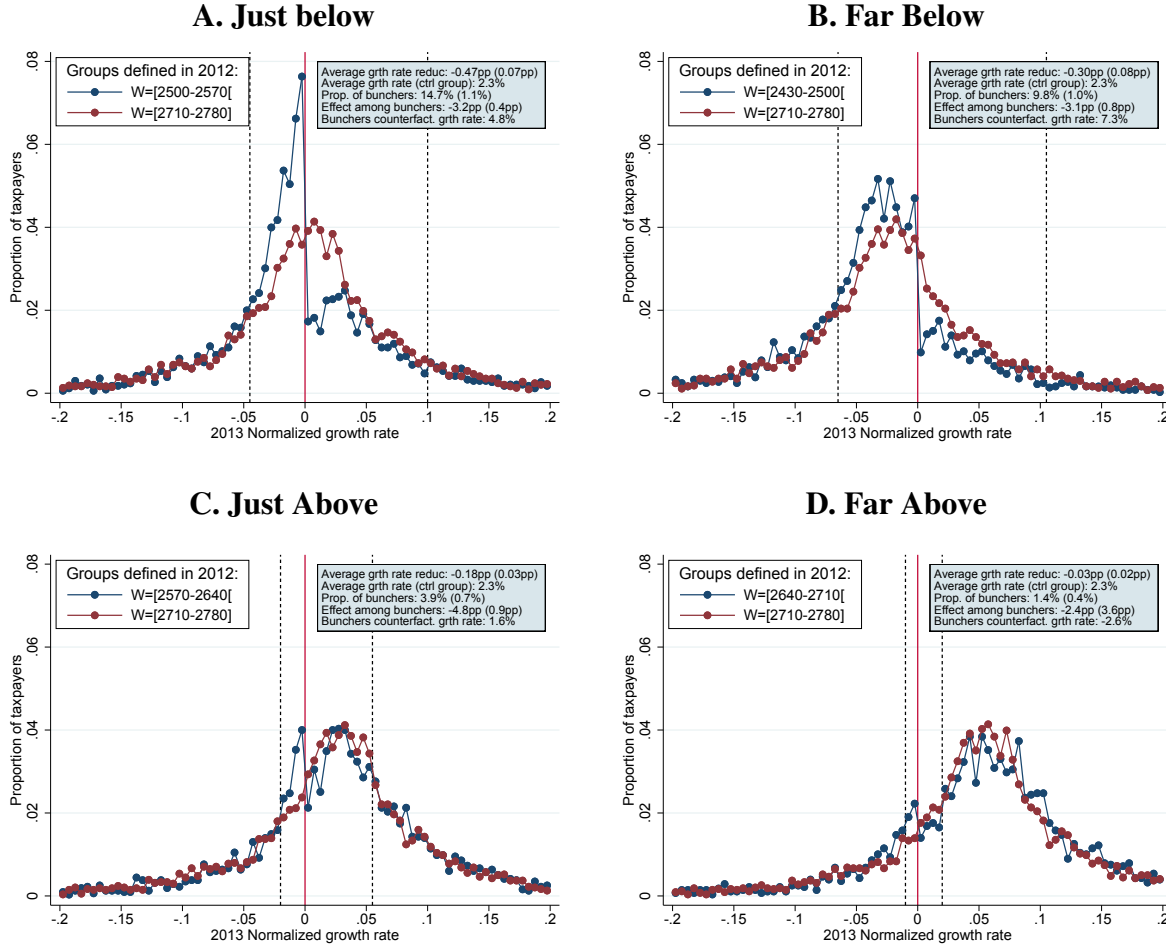
Notes: This figure investigates whether the distribution of normalized growth rates in the control group (taxpayers located in the interval [2710K,2850K] in 2010) is comparable to the distribution of normalized growth rates for other taxpayers (“Far below”, “Just below”, “Just above”, and “Far above”). We define our control and treated group by level of wealth in 2010, and plot their 2011 normalized growth rates as explained in Sections 4.2.1 and 4.2.2.

Figure A.18: Validation of the identification assumption: Pre-reform Growth Rates for Groups Defined in 2012



Notes: This figure shows the distribution of wealth growth rates before the 2013 reform, for our treatment and control groups (defined in 2012).

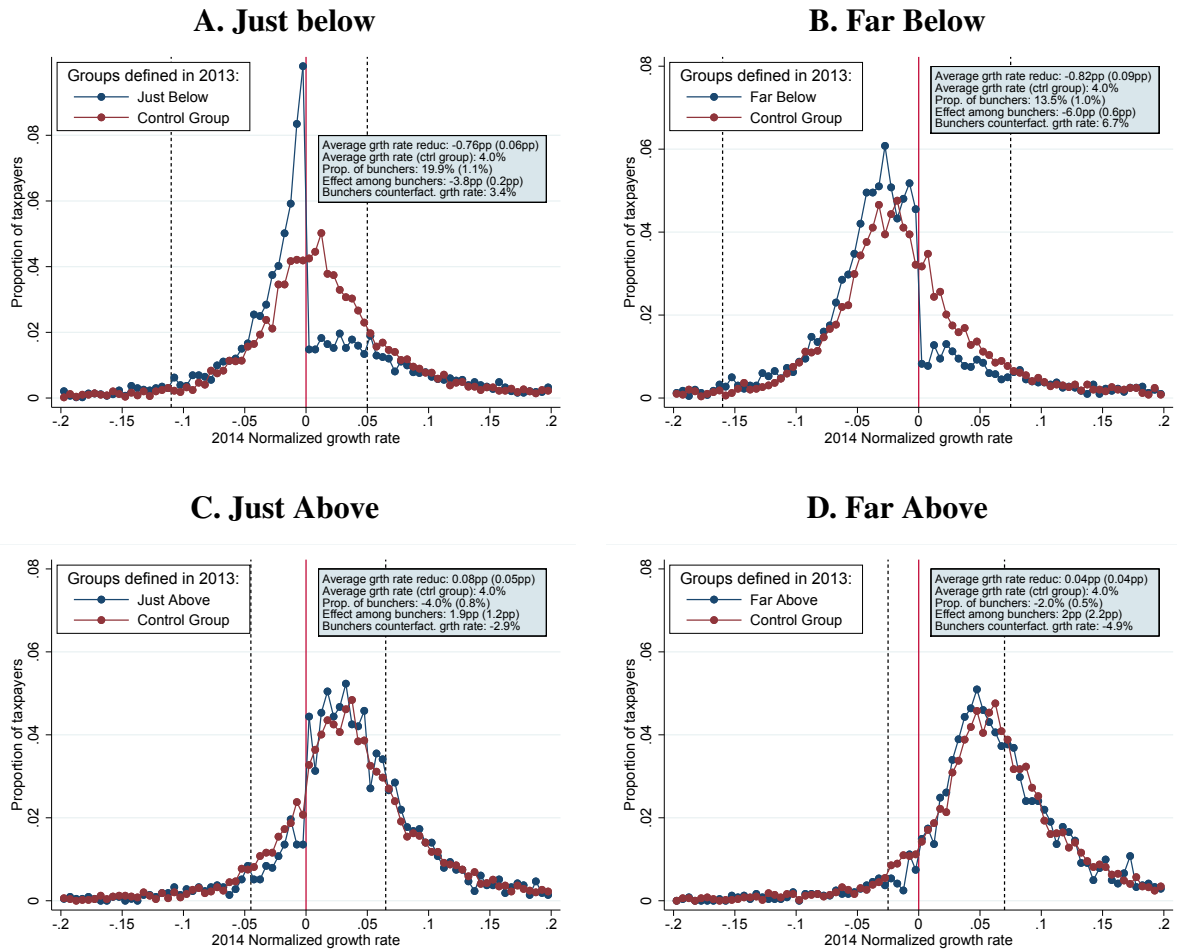
Figure A.19: **Robustness checks: Dynamic Bunching using additive instead of multiplicative formulas**



Notes: This figure investigates the sensitivity of our results to the type of formula used to compute the placebo threshold. This figure plots the distributions of normalized growth rates as defined in Section 4.2 for the control group and for one treated group (“Just below” in Panel A; ‘Far below” in Panel B; “Just above” in Panel C; and “Far Above” in Panel D), where groups are defined in 2012. Each panel summarizes our estimates of the impact of the simplification reform on wealth growth rates, using our dynamic bunching analysis described in Section 4.2.3. Each panel reports the average growth rate reduction between the treated and control group (ITT); the average growth rate in the control group; the proportion of the treated group that bunches (“bunchers”); the reduction in growth rates among bunchers (LATE); and the counterfactual growth rate of bunchers in the absence of the simplification threshold.

As compared to Figure 10, the distribution for the control group relies on the additive (Equation 3) instead of the multiplicative formula (Equation 2).

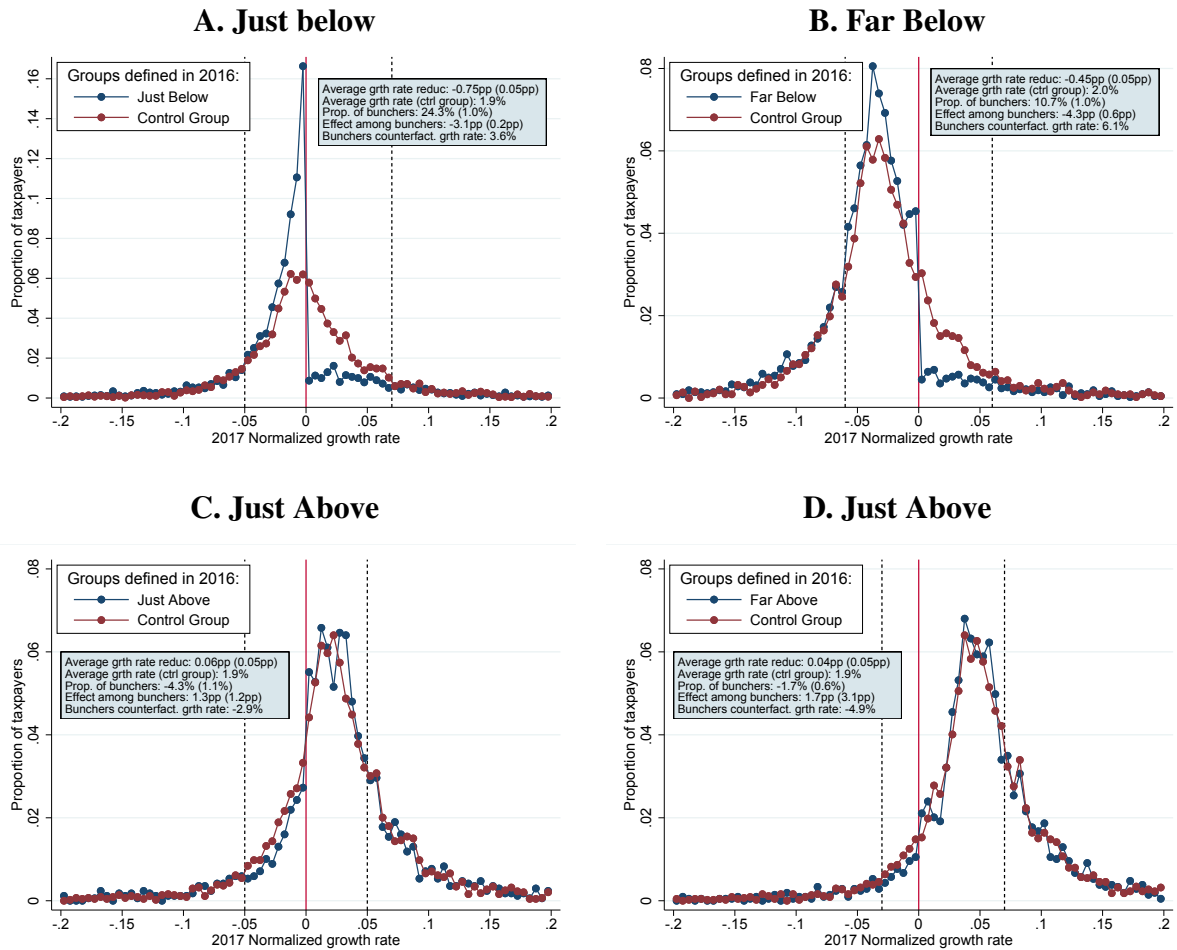
Figure A.20: Dynamic Bunching for the 2013 Cohort



Notes: This figure plots the distributions of normalized growth rates as defined in Section 4.2 for the control group and for one treated group (“Just below” in Panel A; “Far below” in Panel B; “Just above” in Panel C; and “Far Above” in Panel D), where groups are defined in 2013. Each panel summarizes our estimates of the impact of the simplification reform on wealth growth rates, using our dynamic bunching analysis described in Section 4.2.3. Each panel reports the average growth rate reduction between the treated and control group (ITT); the average growth rate in the control group; the proportion of the treated group that bunches (“bunchers”); the reduction in growth rates among bunchers (LATE); and the counterfactual growth rate of bunchers in the absence of the simplification threshold.

As compared to Figure 10, groups (“cohorts”) are defined based on their level of taxable wealth in 2013 instead of 2012.

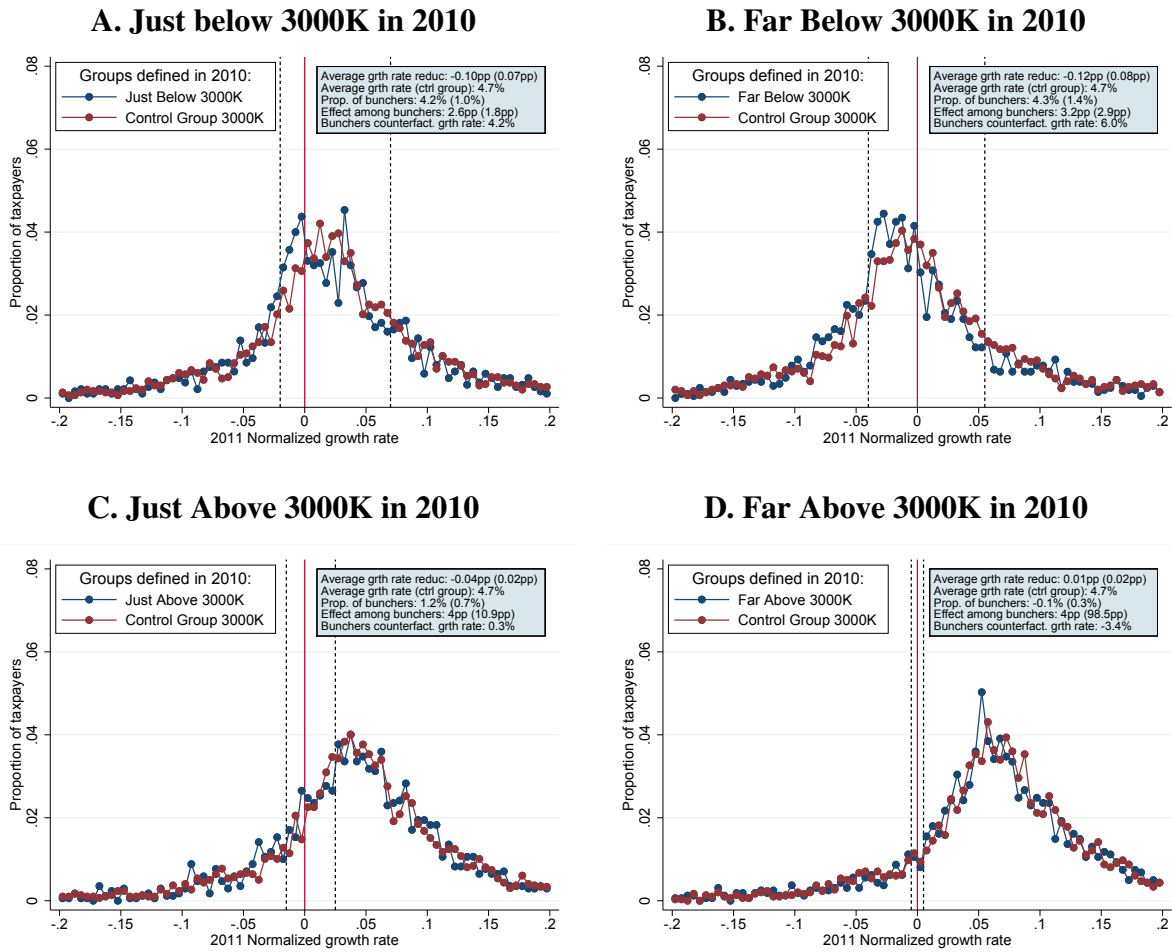
Figure A.21: Dynamic Bunching for the 2016 Cohort



Notes: This figure plots the distributions of normalized growth rates as defined in Section 4.2 for the control group and for one treated group (“Just below” in Panel A; “Far below” in Panel B; “Just above” in Panel C; and “Far Above” in Panel D), where groups are defined in 2016. Each panel summarizes our estimates of the impact of the simplification reform on wealth growth rates, using our dynamic bunching analysis described in Section 4.2.3. Each panel reports the average growth rate reduction between the treated and control group (ITT); the average growth rate in the control group; the proportion of the treated group that bunches (“bunchers”); the reduction in growth rates among bunchers (LATE); and the counterfactual growth rate of bunchers in the absence of the simplification threshold.

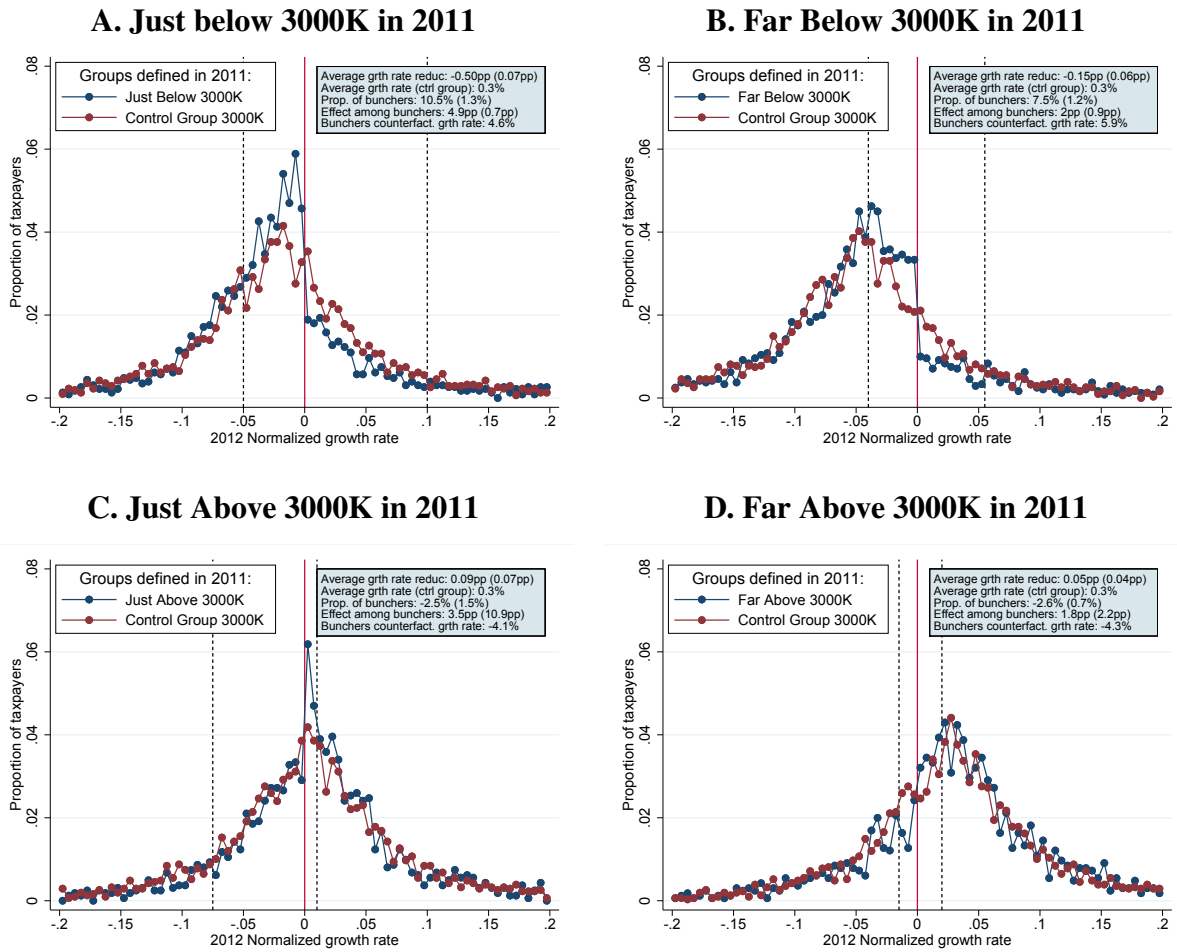
As compared to Figure 10, groups (“cohorts”) are defined based on their level of taxable wealth in 2016 instead of 2012.

Figure A.22: Distributions of 2011 normalized growth rates of treated and control group around the 3,000K simplification threshold



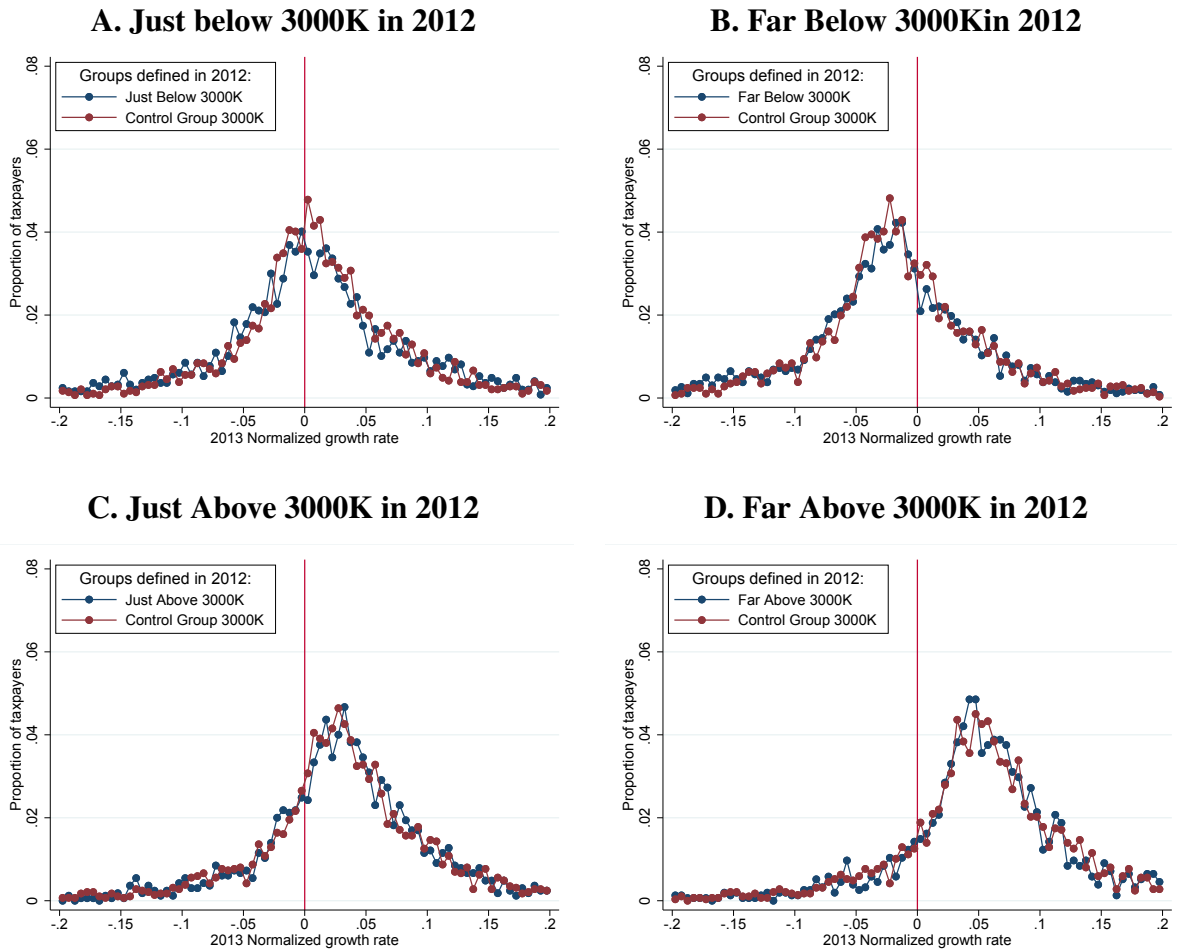
Notes: This figure applies the dynamic bunching analysis to the introduction of the simplification threshold at 3,000K threshold in 2011. This figure plots the distributions of 2011 normalized growth rates ($f(\tilde{g}_{i,3000})$) as defined in Section 4.2 for the control group and for one treated group (“Just below 3000K” in Panel A; “Far below 3000K” in Panel B; “Just above 3000K” in Panel C; and “Far Above 3000K” in Panel D), where groups are defined based on their level of taxable wealth in 2010. The groups “Far Below 3000K”, “Just Below 3000K”, “Just above 3000K”, and “Far Above 3000K” correspond to individuals with wealth in the range [2850K,2925K[, [2925K,3000K[, [3000K,3075K[, [3075K,3150K[, respectively. The control group corresponds to individuals with wealth in the range [3150K,3225K[.

Figure A.23: **Distribution of 2012 normalized growth rates of treated and control group around the 3,000K simplification threshold**



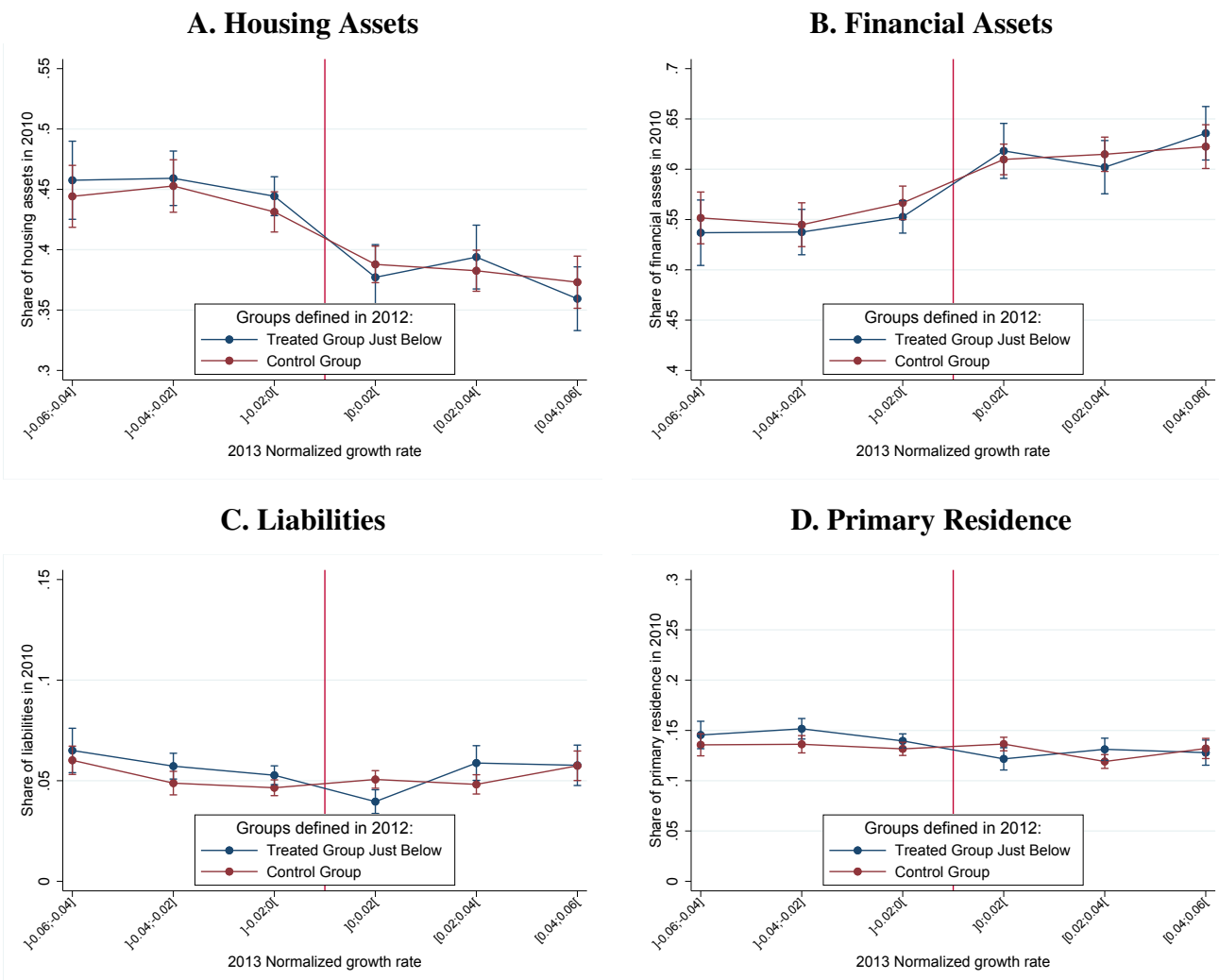
Notes: This figure applies the dynamic bunching analysis to the simplification threshold at 3,000K threshold in 2012. This figure plots the distributions of 2012 normalized growth rates ($f(\tilde{g}_{i,3000})$) as defined in Section 4.2 for the control group and for one treated group (“Just below 3000K” in Panel A; “Far below 3000K” in Panel B; “Just above 3000K” in Panel C; and “Far Above 3000K” in Panel D), where groups are defined based on their level of taxable wealth in 2011. The groups “Far Below 3000K”, “Just Below 3000K”, “Just above 3000K”, and “Far Above 3000K” correspond to individuals with wealth in the range [2850K,2925K[, [2925K,3000K[, [3000K,3075K[, [3075K,3150K[, respectively. The control group corresponds to individuals with wealth in the range [3150K,3225K[.

Figure A.24: **Distribution of 2013 normalized growth rates of treated and control group around the 3,000K simplification threshold**



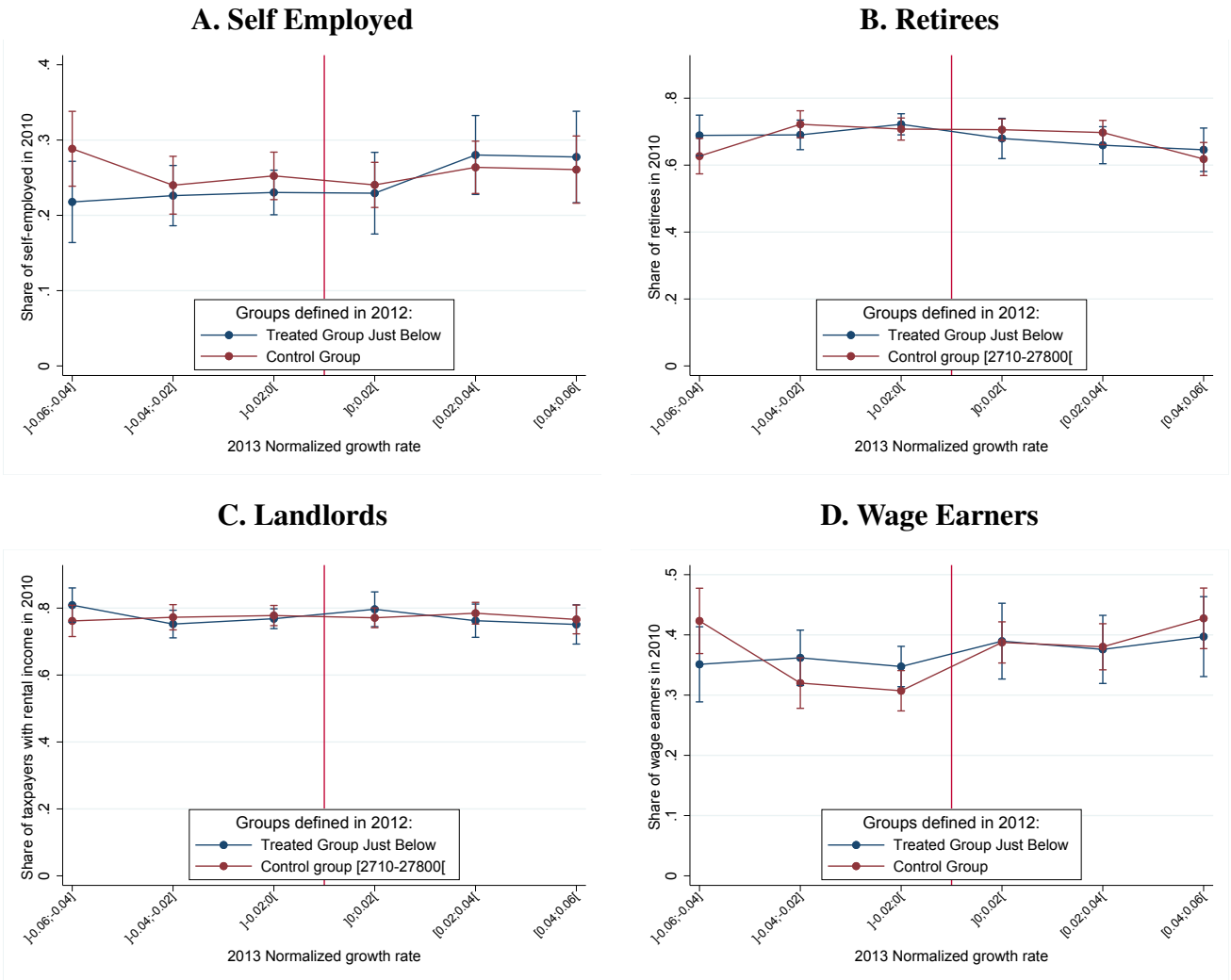
Notes: This figure applies the dynamic bunching analysis to the simplification threshold at 3,000K threshold in 2013. This figure plots the distributions of 2013 normalized growth rates ($f(\tilde{g}_{i,3000})$) as defined in Section 4.2 for the control group and for one treated group (“Just below 3000K” in Panel A; “Far below 3000K” in Panel B; “Just above 3000K” in Panel C; and “Far Above 3000K” in Panel D), where groups are defined based on their level of taxable wealth in 2012. The groups “Far Below 3000K”, “Just Below 3000K”, “Just above 3000K”, and “Far Above 3000K” correspond to individuals with wealth in the range [2850K,2925K[, [2925K,3000K[, [3000K,3075K[, [3075K,3150K[, respectively. The control group corresponds to individuals with wealth in the range [3150K,3225K[.

Figure A.25: Differences in wealth composition in 2010



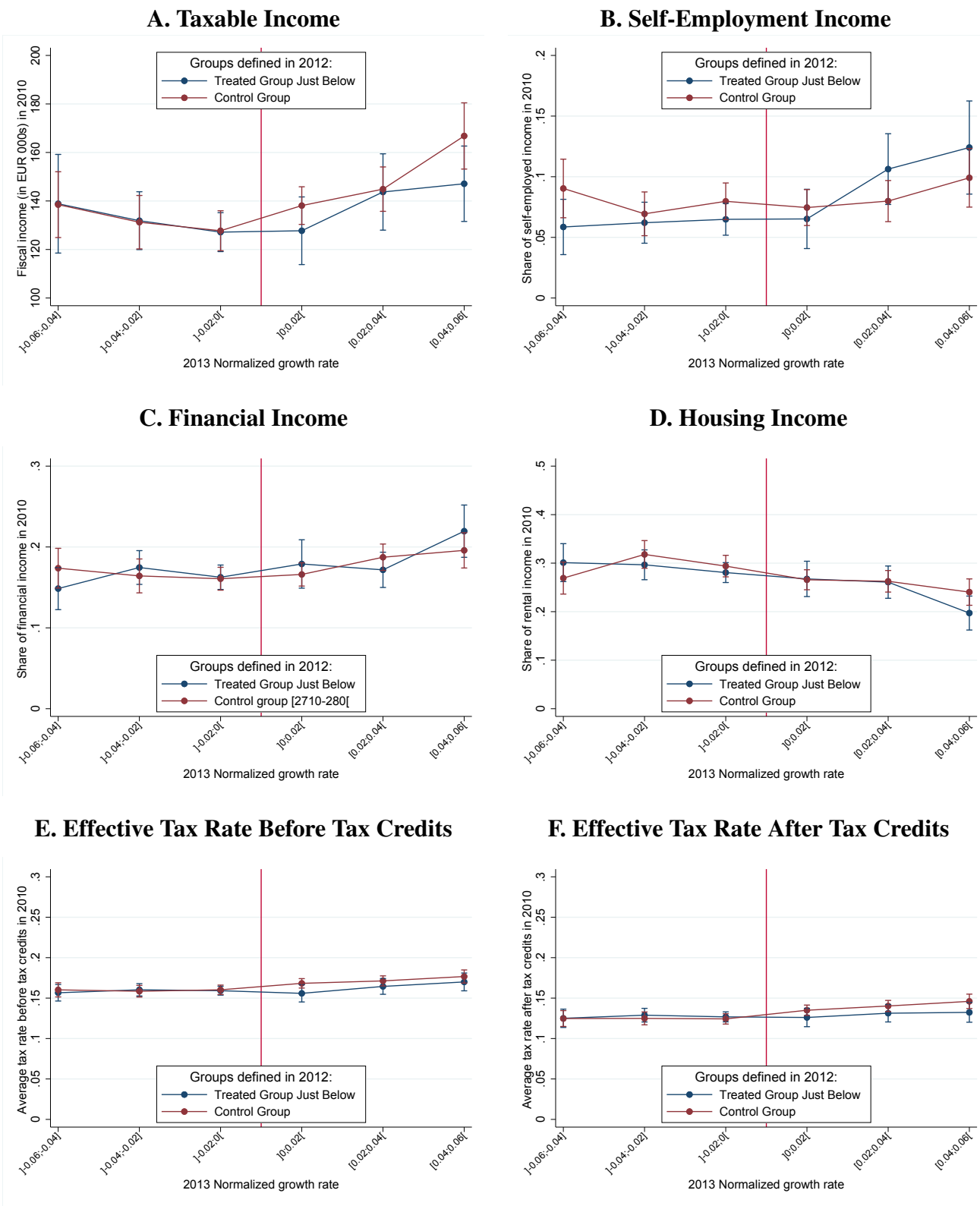
Notes: This figure shows differences in wealth composition in 2010 for our treated and control group, by normalized growth rate defined between 2012 and 2013.

Figure A.26: Differences in occupation in 2010



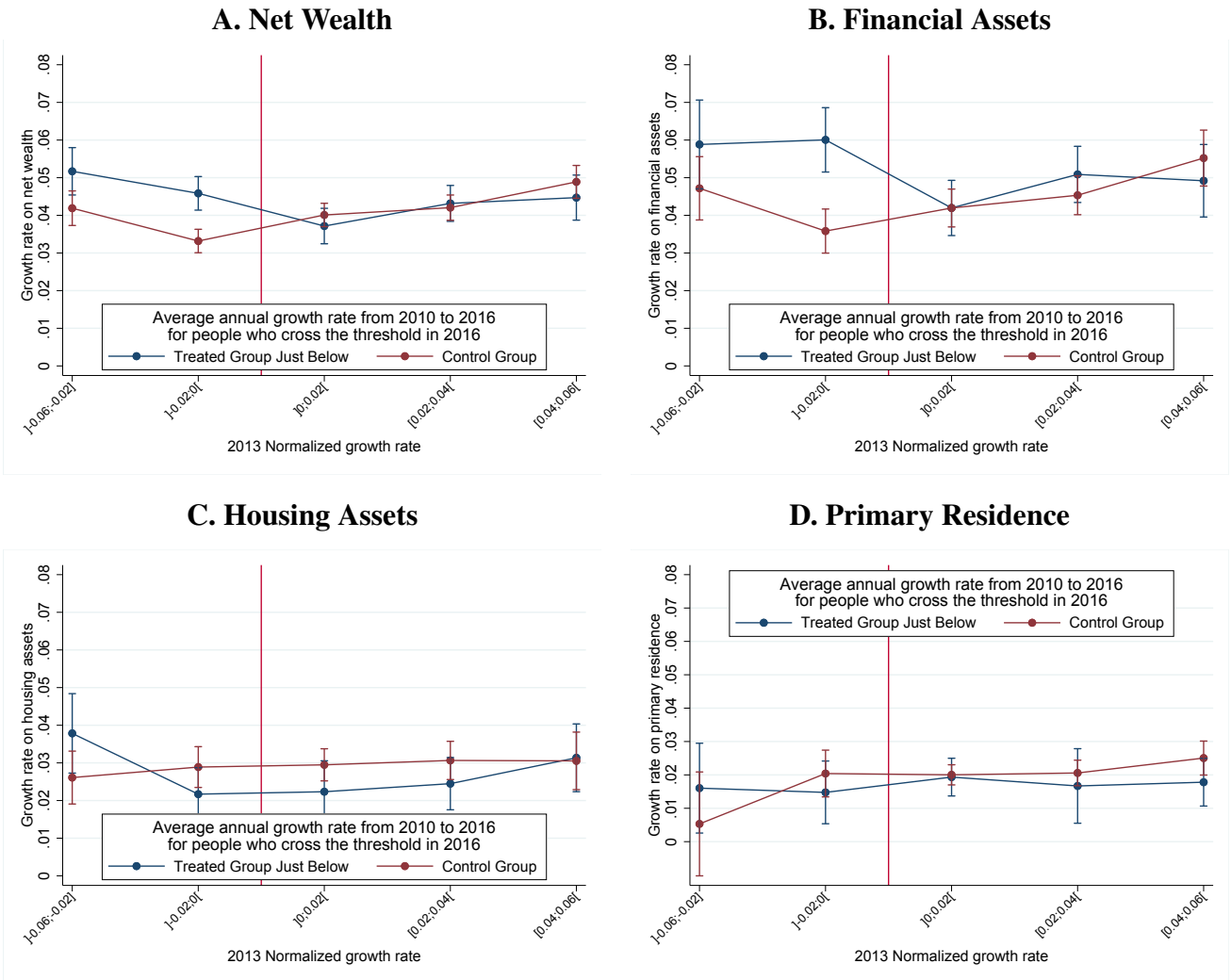
Notes: This figure shows differences in occupation in 2010 for our treated and control groups defined in 2012, by bin of 2013 normalized growth rate.

Figure A.27: Differences in income composition in 2010



Notes: This figure shows differences in income composition in 2010 for our treated and control group defined in 2012, by bin of 2013 normalized growth rate.

Figure A.28: Average Annual Growth Rate After Crossing the Simplification Threshold, 2016



Notes: This figure shows the average annual growth rates in components of taxable wealth from 2010 to 2016, for treated and control individuals defined in 2012, who cross the simplification threshold in 2016. Normalized growth rates are defined between 2012 and 2013. For the control group, the normalized growth rate is defined relative to the placebo threshold.

Table B.1: Descriptive Statistics, all taxpayers in France

	2007	2010	2011	2017
<i>Demographics</i>				
Age	65	66	67	68
% Married	69%	69%	68%	67%
% Non residents	5%	4%	5%	4%
% Retirees	64%	67%	68%	70%
% Wage Earners	40%	38%	38%	38%
% Self-Employed	17%	23%	25%	24%
% Landlords	69%	67%	72%	72%
<i>Incomes & income tax</i>				
Taxable income	91 819	89 668	115 511	129 707
Gross income	129 410	114 487	165 969	163 686
<i>Pension benefits (%)</i>	18%	23%	18%	22%
<i>Wages (%)</i>	25%	28%	24%	26%
<i>Self-employment income (%)</i>	5%	13%	12%	9%
<i>Rental income (%)</i>	14%	17%	17%	16%
<i>Financial income (%)</i>	15%	18%	21%	13%
<i>Other (incl. Capital gains) (%)</i>	22%	1%	8%	13%
Income Tax	21754	17099	26720	28161
Income tax rate (% gross income)	17%	15%	16%	17%
<i>Wealth & wealth tax</i>				
Taxable wealth ('000)	1 716	1 747	2 630	2 813
Wealth tax	45%	46%	.	.
<i>Primary residence (%)</i>	18%	17%	.	.
<i>Financial assets (%)</i>	63%	62%	.	.
<i>Liabilities (%)</i>	8%	8%	.	.
Wealth tax	7 638	6 094	13 268	11 689
Wealth tax rate (%)	0.45%	0.35%	0.50%	0.42%
Wealth tax (total, billion)	4.0	3.6	3.8	4.2
Tax units	526105	590031	287157	356062

B Institutional Appendix

B.1 Assessing the wealth tax base and the wealth tax liability

To assess the wealth tax base and the amount of wealth tax to be paid, households must first assess which of their assets are fully exempted from the wealth, and which of their assets can lead to partial deductions that reduce their effective wealth tax base. Their wealth tax base is then computed using the market value of all assets that do not satisfy the conditions for full exemption and after applying the partial deductions granted for some assets. Next, tax credits and tax ceiling need to be taken into account in order to obtain the final wealth tax payment that is due to the French administration.

Fully exempted Assets Taxpayers must start by assessing which of their assets are fully exempted from the wealth tax, by satisfying the following conditions:

- **Business Assets related to individuals' main occupation:** The first category of fully exempted assets are business assets related to individuals' main occupation. This exemption rule has different conditions and requirements depending on the type of companies.
 - *Sole proprietorship:* all business assets related to individuals' main professional activity are exempted from the wealth tax. For this condition to be satisfied, this activity must be carried on in an "effective and regular" way. If the taxpayer has more than one occupation, his main activity is the one where most of his time is spent. If the activities are similar or complementaries, they are considered as one only activity for the purpose of the wealth tax.
 - *Limited Liability Companies (LLCs):* For LLCs that are not liable to the corporate tax, the exemption is granted if the company represents the main professional activity of the taxpayer, following the same criteria than described before. In addition, the individual must have a managing position in the company. No additional conditions on capital held is required.
 - *Companies liable to the Corporate Tax:* Assets held in companies subject to the corporate tax are exempted if the taxpayer has a managing position that represents more than 50% of her income and if she holds more than 25% of the overall firm's capital. This second condition is no longer necessary if these shares represent more than 50% of the gross value the taxpayers' total wealth.
- **SME's shares acquired through capital subscription** The Dutreuil Law of 2003 introduced a total wealth tax exemption for shares held in a small or medium sized enterprise (SME), if those shares have been acquired through a subscription to the company's capital rather than on the secondary market. This exemption does not require that the taxpayer has any professional activity in the company.
- **Foreign investments** Any financial investments carried-out by non-residents in France are fully exempted from the wealth tax base.

Table B.2: Behavioral Responses to Simplification Threshold, Difference-in-Differences

	Dependent Variable: Wealth Growth Rate in percent				
	(1)	(2)	(3)	(4)	(5)
	Wealth groups defined in 2012				
	Just Below [2500K,2570K[Far Below [2430K,2500K[Very Far Below [2360K,2430K[Just Above [2570K,2640K[Far Above [2640K,2710K[
Pre-Period (2008-2009)	-0.23 (0.35)	-0.01 (0.33)	0.23 (0.33)	-0.13 (0.35)	0.45 (0.37)
Pre-Period (2010-2011)	-0.30 (0.34)	-0.32 (0.33)	-0.03 (0.32)	-0.48 (0.35)	0.50 (0.37)
Post-Period (2013)	-0.77** (0.34)	-0.38 (0.32)	-0.30 (0.31)	-0.16 (0.34)	0.14 (0.36)
Post-Period (2014-2015)	-0.74** (0.30)	-0.43 (0.29)	-0.16 (0.28)	-0.30 (0.31)	-0.16 (0.32)
Post-Period (2016-2017)	-0.63** (0.29)	-0.19 (0.27)	-0.25 (0.27)	-0.23 (0.30)	-0.02 (0.31)
Constant			3.56*** (0.07)		
Observations			241,259		
Individuals			27,021		

Notes: This table summarizes estimates from Equation 10. The dependent variable is the yearly wealth growth rate. Standard errors are clustered at the taxpayer level. The pre-reform coefficient β_{2012j} is normalized to zero such that estimates can be interpreted relative to the pre-reform year 2012. The control group includes taxpayers with wealth in the [2710-2850] bracket in 2012.

- **Arts** All artworks, antiques and collection items (for instance old cars) are fully exempted from the wealth tax base.
- **Intellectual property** All property rights are fully exempted from the wealth tax base for inventors and artists.
- **New residents foreign assets** Since 2008, a preferential regime allows “impatriates” to be fully exempted from the wealth tax on their wealth located abroad for a 5-years duration (8 years since 2017). The preferential regime applies to new residents who have not been tax residents in France for the past 5 years preceding their change of residence. This can apply to French citizens if they satisfy those conditions.

Tax deductions Next, taxpayers must take into account the deductions that reduce their effective wealth tax base for the assets that satisfy the following conditions:

- **Main residency** 30% of the value of a household’s main residence is exempted from the wealth tax and can be deducted from the tax base.
- **Shareholders agreements** Shareholders who commit to hold their shares for a certain duration can deduct 50% (75% since 2006) of those shares from their wealth tax base. To benefit from this tax deduction, the shareholders must have agreed to retain their shares for 6 years, collectively hold at least 20% of the voting rights or 34% of all shares and one of them must be the manager of the company for at least 5 years after the agreement.
- **Employees ownership** Since 2006, employees who own shares in the company where they are employed can deduct 75% of those shares from their wealth tax base. To benefit from this tax deduction, they must hold those shares for at least 6 years. Retirees who previously worked in the company and held the shares for at least 3 years before retiring can also benefit from this tax deduction.
- **Wood, forests and rural properties** Taxpayers who commit to hold and manage wood, forests and long-term leased rural property for at least thirty years can deduct 75% of the market value of those assets from their wealth tax base.
- **Debts** All private debts evaluated in a given year can be deducted from the wealth tax base, but those debts can only be related to assets that are not exempted from the wealth tax. For instance, debts related to business assets and business activity cannot be deducted from the wealth tax base. Eligible debts are deductible in proportion to the fraction of the taxable value of the assets to which they relate ([Dupas \(2020\)](#)).

Tax credits All assets that do not satisfy the conditions for fully exempted assets and partial deductions listed before are included in the wealth tax base. Once taxpayers have self-assessed their wealth tax base, they must assess their tax credits:

- **Charitable giving:** Taxpayers can obtain a tax credit of 50% of their charitable giving to entities recognized as being of public utility by the government. This tax credit cannot exceed 50,000 euros per year.

- **SME's investment:** Since 2008, taxpayers can obtain a tax credit of 50% of their investment in SMEs. The reduction for SME investment adds to the full exemption of SMEs shares acquired through capital subscription.²⁷ The tax credit for SME investment cannot exceed 45,000 per year.

Note that the yearly cap for tax credits is evaluated for both charitable giving and investment in SMEs. If taxpayers want to combine tax credits for SME investment and charitable giving simultaneously, the joint yearly cap is 45,000 euros.

Tax ceiling After assessing their total liability to the wealth tax, accounting for exemptions, deductions and tax credits, taxpayers can benefit from the ceiling of their wealth tax. The wealth tax ceiling (*plafonnement*) was introduced in 1989 and establishes that the total amount of taxes paid by an individual for the wealth tax and the income tax in a given year cannot exceed 85% of the total net taxable income received the year before (75% since 2013).²⁸ From 1996 to 2013, the amount of wealth tax reduction granted by the ceiling mechanism could not exceed 50% of the initial wealth tax amount for individuals with taxable wealth above a certain threshold.²⁹ In 2013, the government reintroduced a version of the wealth tax ceiling without the cap.

B.2 Definition of tax unit and territoriality

The wealth tax base is defined at the tax unit level by summing up all worldwide assets, net of debts, owned by French tax residents. The tax unit includes married couples, civil partners (under a civil partnership), partners in a public cohabiting relationship as well as minor children. Married couples are allowed to be taxed separately if they are in the process of separation or divorce and live separately.

Tax residency for the purpose of the wealth tax is defined at the individual, not the tax unit level. An individual qualifies as a French tax resident as at 1 January of a given year if: (i) the individual has his "home" in France or (ii) the individual has the centre of his economic interests in France.

For French tax residents, the taxable base includes all taxable assets (as defined above) located in France and outside France. For non-residents, the taxable base is limited to assets located in France, with the exception of financial assets that are fully exempted from the wealth tax.³⁰ Additionally, some bilateral tax treaties grant wealth tax exemptions to non-residents from specific countries. For instance, residents from Gulf countries are exempted from the wealth tax on their assets held in France if they own enough financial securities in France.

²⁷This means that since 2008, taxpayers can benefit from a tax credit equal to the value of her contribution in the SME upon the year of subscription, on top of the full exemption of the shares invested from the wealth tax base. A direct investment in a SME satisfying the condition for capital subscription thus leads to both full exemption of the shares but also to a wealth tax credit the year of the investment.

²⁸Income taxes include both the progressive income taxes and other flat income taxes (CSG and CRDS), as well as a variety of small payroll taxes paid on capital income.

²⁹More specifically, if wealth < 2.45 taxpayers can benefit from fully capped mechanism, if wealth < 3.62 and > 2.45 the reduction is limited to 11,160 euros and if wealth > 3.62 it is limited to 50% of initial ISF.

³⁰See article 885 du code général des impôts (CGI). To be exempted from the French wealth tax, financial assets held by non-residents must be linked to a company located in France.

B.3 Valuation of assets

There is no third-party reporting for the wealth tax in France. The assets included in the wealth tax base must be valued each year at their market value by the taxpayer. When the assets include shares of a company, the taxpayer should obtain information on the valuation of those shares from the company. The tax administration also provides official guidelines to taxpayers for the market value assessment of their shares in unlisted companies and other companies. For real estate, there is an online official database providing sale prices, square metres for properties located and sold in France, that can be used to assess the value of real estate assets. For jewelry, cars, horses, planes and boats, the valuation must be based on the public sale prices for similar goods that occurred one to two years before the reporting year.

B.4 Reporting requirements and timing

The net value is evaluated on the 1st of January of year t for fiscal year t . Thus, in calendar year t , taxpayers fill out their income tax return and pay their income tax for income earned in year $t - 1$, but fill out their wealth tax return and pay a tax based on the value of their wealth on January 1st of year t . Households must send their filled wealth tax return and payment (by check or bank transfer) to the tax authorities by mid June of each year. For individuals who are below the simplification threshold, the payment of the wealth tax can be made at the end of August of the same year. Late payment automatically triggers a penalty of 10%. The simplified form can be filed as part of the appendix of the income tax return starting in 2012.

If noncompliance is uncovered upon audit by the tax authorities, taxpayers can be required to file amended returns for up to 10 preceding years. Amended returns had generally to be filed up to 3 years backwards, but this was extended to 6 years in case the tax administration found an asset had not been reported at all (e.g., a taxpayer failed to report owning a secondary home, or failed to file a return), and to 10 years in case of unreported foreign assets (e.g., a taxpayer failed to report an offshore bank account).

B.5 The 2012 Reform

During the year 2011, the Sarkozy government announced the creation of a two-brackets schedule, with average tax rates of 0.25% rate in the [1,300K-3,000K] bracket and a 0.5% average tax rate above 3,000K to take effect in 2012 (on wealth values as of January 1st, 2012). For instance, a taxpayer with 2500K in wealth would pay a wealth tax of $0.25\% \times 2500K$ and a taxpayer with taxable wealth equal to 4000K would pay a wealth tax of $0.5\% \times 4000K$. These newly announced brackets and rates represented an important decrease in the wealth tax rate; they did not, however, apply to the 2011 wealth, unlike the other two components of the reform. This part of the reform was scheduled to take effect in 2012.

In July 2012, after the election of President Hollande, the old progressive tax system from 2011 was reinstated, with some minor changes. The new 2012 reform passed by the new government essentially reversed the changes to the tax schedule. As a result, taxpayers never actually benefitted from the more generous schedule enacted in June 2011. Since the wealth tax for 2012 had already been filed and paid for under the Sarkozy reformed tax schedule, there was an exceptional wealth

levy put in place in September 2012 such that the total wealth tax paid for 2012 (equal to the wealth tax paid under the Sarkozy rules during the filing of taxes in June 2012 plus the special levy in September 2012) amounted to the wealth tax that would have been paid absent the Sarkozy reform. The 2012 reform also instituted a slightly amended schedule from 2013 on, close to the pre-2011-reform schedule.³¹ The progressive tax system then continued to apply in 2013.

³¹Relative to the system in place before the 2011 reform, the 2013-onward tax system featured somewhat lower marginal tax rates and removed the top tax bracket.

Table B.3: **Reporting Requirements for Wealth Taxpayers in France**

	Regular Form	Simplified Form
<i>Tax exemptions</i>		
Taxpayer has exempted professional assets	Y	N
Name, activity and tax ID of the company of main activity	Y	N
Names, activities and tax IDs of held companies	Y	N
Profession in held companies	Y	N
Share of capital owned in held companies	Y	N
Capital share representing more than 50% of taxable wealth	Y	N
Capital share after takeover by employees	Y	N
Holding shares after SMEs capital buyout	Y	N
<i>Taxable assets decomposition</i>		
Real estate, main residence (address + characteristics+value)	Y	N
Real estate, other buildings (address + characteristics+value)	Y	N
Forests	Y	N
Rural lands	Y	N
Agricultural lands	Y	N
Shares owned with 6 years holding clause	Y	N
Shares owned by employees	Y	N
Other financial assets	Y	N
Liquid assets	Y	N
<i>Tax deductions</i>		
75% deduction for forests (+ proofs)	Y	N
75% deduction for 6 years holding clause (+ proofs)	Y	N
75% deduction for shares owned by employees (+ proofs)	Y	N
Liabilities (+ proofs)	Y	N
<i>Tax credits</i>		
Direct investment in SMEs*	Y	Y
Investment in SMEs through holdings (FIP/FCPI)*	Y	Y
Charitable giving*	Y	Y
<i>Tax ceiling</i>		
Income taxes paid	Y	N
Amount of capped wealth tax	Y	Y
<i>Gross and Net Taxable Wealth</i>		
Net Taxable Wealth	Y	Y
Gross Taxable Wealth	Y	Y

Notes: *components for which taxpayers filling the regular form must attach proofs, while taxpayers filling the simplified form do not have to attach proofs.

C Static Bunching Computations

This section details analysis of bunching at the kink point created by the 2,530K marginal tax rate threshold in the French wealth tax. In 2010, the threshold was increased to 2,570K and became associated with a change in reporting requirement. Figure A.9 presents bunching evidence for the full population, for years 2010, and 2013-2017. We plot the observed distribution around the "kink" in bins of 10, 000 euros in blue and the counterfactual distribution absent the kink in pink. The counterfactual distribution is obtained by fitting a polynomial to the observed distribution, excluding data in a range around the kink and extrapolating the fitted distribution to the kink. We use a polynomial of order 7 as the baseline, but our estimates show very little sensitivity to this choice. To fit our polynomial, we choose the lower bound manually and determine the upper bound based on the methodology described in (Kleven, 2016). The upper and lower bounds are plotted with the vertical dotted black lines in Figure A.9.

For year 2010, the 2,530K threshold is associated with a change in marginal tax rate only (pure kink). For that year, we therefore use the methodology for kinks and choose the upper bound visually. We then compute the excess mass B at the kink as the difference between the observed and counterfactual distribution in the entire excluded range.

For years 2013-2017, the 2,570K threshold is associated with both a change in marginal tax rate (kink) and a change in reporting requirements (notch). We follow the methodology for notches to compute the excess mass. We define the excess mass B as the difference between observed and counterfactual distribution in the left side of the excluded range (below the threshold). We choose our upper bound such that the excess mass equals the missing mass right to the threshold.

The estimated parameters are plotted in Figure A.9 and summarized in Table B.4. We also report b that we define as the total excess mass computed as described before, scaled by the height of the counterfactual distribution at the threshold. This parameter can be interpreted as the number of bins by which bunchers are moving on average (Jakobsen et al., 2020). As showed by Saez (2010), this statistic is proportional to the compensated elasticity in the presence of a pure kink.

Table B.4: **Parameters Estimates from Static Bunching**

Year	Excess Mass (B)	b	$d\tau$
2010	46	0.08	.25%
2013	1,952	2.74	.30%
2014	2,348	3.07	.30%
2015	2,163	2.64	.30%
2016	3,124	3.68	.30%
2017	3,865	4.49	.30%

Notes: This table reports the estimated parameters from the static bunching analysis using the counterfactual distribution plotted in Figure A.9 as detailed in the text. The parameter b is the total excess mass around the kink (B) scaled by the average height of the counterfactual distribution at the kink.

D Missing Taxpayers at Exemption Thresholds

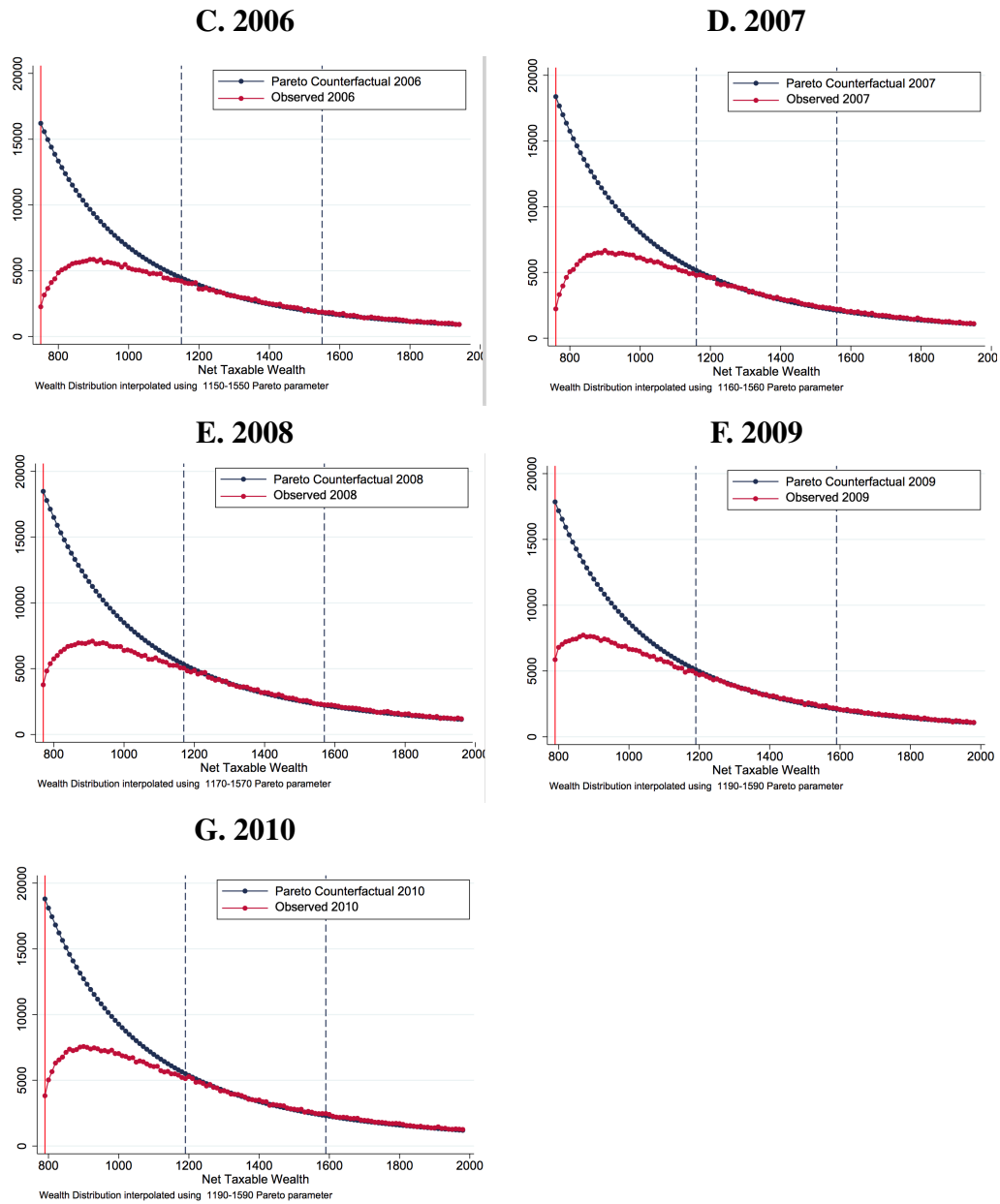
This section describes the methodology used to impute counterfactual wealth distributions around the exemption thresholds.

To build counterfactual wealth distribution, we use the parametric properties delivered by the Pareto distribution assumption. It has been well documented that the top of the wealth distribution follows a Pareto distribution. As the French wealth tax covers the top 1% of the taxable wealth distribution, this extreme tail assumption can be made to extrapolate net taxable wealth of individuals above the exemption threshold. A Pareto distribution has the following form : $f(y) = a \frac{k^a}{y^{a+1}}$. If we assume that the distribution of wealth is Pareto distributed, we can then estimate the parameters a and k of the Pareto distribution for the wealth bracket $[s_i, s_{i+1}]$. Our method is based on the survival distribution function $p(y) = (k/y)^a$ and relies on the number of households and the threshold of each tax brackets. The parameters a et k are estimated by solving the two equations $k = s_i \cdot p(s_i)^{1/a}$ and $k = s_{i+1} \cdot p(s_{i+1})^{1/a}$ where $p(s_i)$ is the fraction of households above the threshold s_i . Solving the system gives:

$$\begin{cases} a_i = \frac{\log \frac{p(s_{i+1})}{p(s_i)}}{\log \frac{s_i}{s_{i+1}}} \\ k_i = s_i \cdot p(s_i)^{1/a_i} \end{cases} . \quad (11)$$

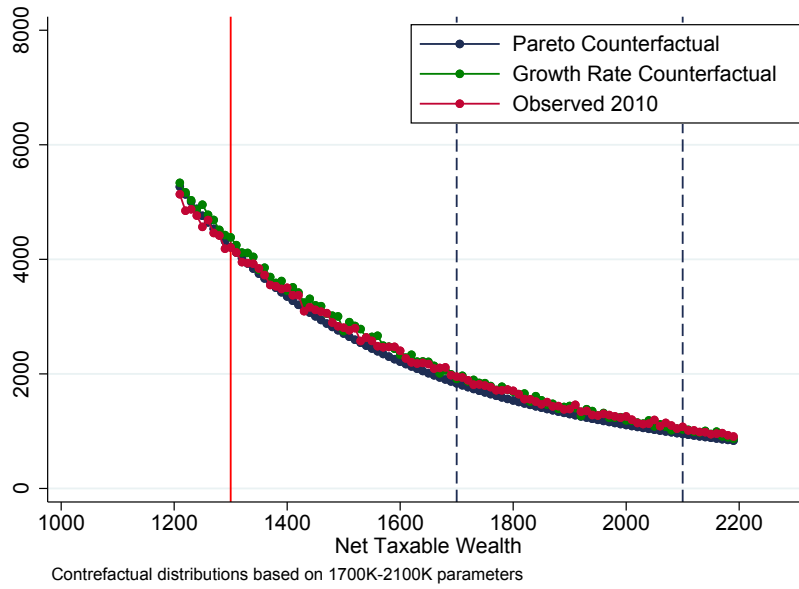
We use those equations to infer the distribution of taxable wealth in segments affected by the exemption threshold, using the Pareto parameter a from unaffected segments.

Figure A.29: Counterfactual and Observed Distributions at Exemption Threshold



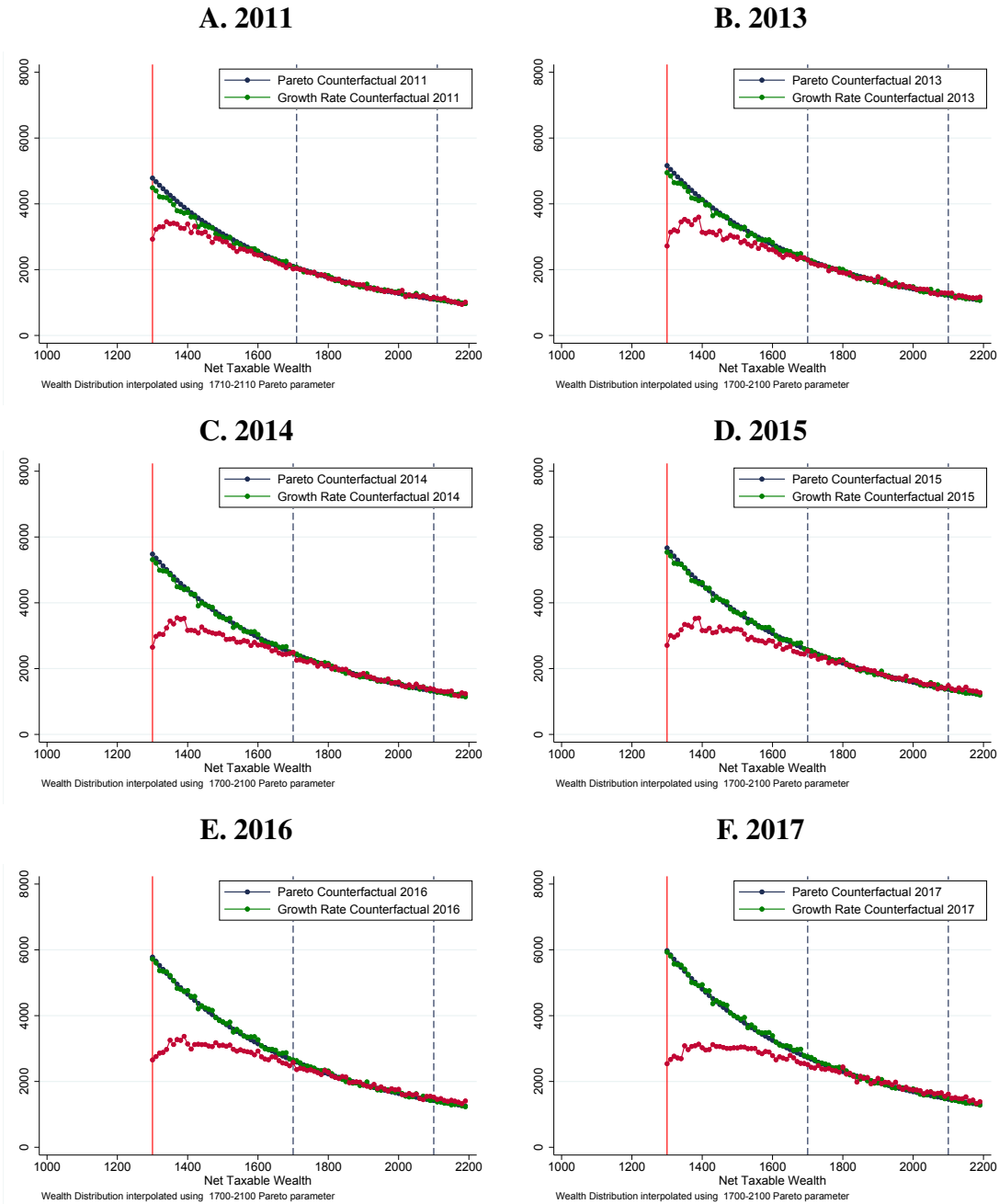
Notes: This figure shows observed and counterfactual wealth distributions around the exemption threshold between 2006 and 2010. Taxpayers self-assess their exemption to the wealth tax, and file a wealth tax return only if their taxable wealth is above the exemption threshold. If their taxable wealth level is below the exemption threshold, they do not disclose any information regarding their taxable wealth. Counterfactual distributions are extrapolated using Pareto parameters in the segment of the wealth distribution not distorted by misreporting at exemption threshold, denoted by dashed blue lines. The wealth tax schedule over the period is summarized in details in Figure 1 (Panel B).

Figure A.30: Empirical Strategy Validation for 2010 Placebo Year



Notes: This figure shows the prediction of the 2010 distribution using our main methodology. The Pareto prediction method uses the average Pareto parameter in part of the distribution that is unaffected by the exemption threshold to extrapolate the full wealth distribution. The growth rate method uses the average 2009-2010 growth rate in the number of taxpayers in the part of the distribution that is unaffected by the exemption threshold and applies it to the observed 2009 distribution. The blue dashed line denotes the part of the unaffected part of the distribution used to implement these two methodologies.

Figure A.31: Counterfactual and Observed Distributions at Exemption Threshold



Notes: This figure shows observed and counterfactual wealth distributions around the exemption threshold between 2011 and 2017. Taxpayers self-assess their exemption to the wealth tax, and file a wealth tax return only if their taxable wealth is above the exemption threshold. If their taxable wealth level is below the exemption threshold, they do not disclose any information regarding their taxable wealth. Counterfactual distributions are extrapolated using Pareto or average growth rate parameters in the segment of the wealth distribution not distorted by misreporting at exemption threshold, denoted by dashed blue lines. The wealth tax schedule over the period is summarized in details in Figure 1 (Panel B).

Table B.5: **Missing Taxpayers At Exemption Thresholds**

Year	Bracket	Missing Taxpayers	% Taxpayers
<i>Panel A: Exemption Threshold</i>			
2006	760-1200	155208	41.3
2007	770-1200	179597	42.2
2008	790-1200	166754	38.9
2009	790-1200	134686	33.5
2010	790-1200	162116	37.8
2011	1300-1700	6078	5.1
2013	1300-1700	16406	12.4
2014	1300-1700	24440	17.1
2015	1300-1700	30816	20.5
2016	1300-1700	42395	26.4
2017	1300-1700	50478	30.4

Notes: This Table summarizes estimated missing number of taxpayers around the exemption thresholds in the wealth tax schedule, using our predicted counterfactual distribution, based on Pareto interpolation.

E A Model of Taxpayer Behavior

This Section presents a simple model of taxpayer behavior that can help rationalize our findings (summarized in Section 5.3). The lower growth rates below the simplification threshold and the absence of bunching at tax kinks in the detailed regime are consistent with lower evasion costs for taxpayers filing the simplified form. Bunching at the exemption threshold (which is a combination of a reporting notch and a tax kink) suggests a fixed cost from entering the wealth reporting area, such as hassle costs or administrative reporting costs. Denote this fixed cost of filing a wealth tax return by γ_i .

Taxpayer i has wealth w_{it} in year y and reports wealth \hat{w}_{it} . We assume away real wealth responses for expositional ease; adding them would provide another channel for responses. The sequence of expected wealth is given exogenously to the taxpayer. For the sake of notation, we omit expectation operators but it can be assumed that all future payoffs are in expected value.

The cost of misreporting has two components, which differ depending on whether the taxpayer is in the simplified or the detailed reporting regime. First, there is a cost to misreporting wealth. This cost is increasing and convex in the amount misreported. Denote by $v_i^k(w_{it} - \hat{w}_{it})$ the cost of reporting wealth \hat{w}_{it} when true wealth is w_{it} for taxpayer i in regime k , where $k = S$ for the simplified regime and $k = D$ for the detailed regime. One interpretation of this cost specification is that the cost represents the expected cost from being caught misreporting by the tax authority, which is a function of the probability of being audited, the probability of misreporting being uncovered conditional on an audit, and the penalty for misreporting, all of which are potentially increasing in the gap between true and reported wealth.

In addition, the cost of misreporting has a second component, which depends on the reported wealth *growth*: $h_i^k(\hat{w}_{it} - \hat{w}_{i,t+1})$ is the cost of reporting a growth in wealth $\hat{w}_{i,t+1} - \hat{w}_{i,t}$. This cost is decreasing and convex in $\hat{w}_{it} - \hat{w}_{i,t+1}$, i.e., the lower reported growth the higher the misreporting cost. A key difference between an income flow (such as self-employed income) and a stock (such as wealth) is that low wealth growth rates—especially negative growth rates—can raise a flag for the tax authority. For instance, it is likely that a taxpayer who reports the same wealth level in subsequent years is misreporting because asset values change due to price changes. Therefore, it may be that $h_i(0) > 0$. Similarly, a decline in reported wealth may raise flags if the economy is overall growing and returns are positive (as was the case over the entire period of study), so the cost may become steeper for negative reported growth values.

A given taxpayer has a value $V_{i,t}$ from being in the simplified regime. As explained in the main text, this could be the value due to lower hassle costs, privacy concerns, or the ease of misreporting. Consider a taxpayer in year t who reports taxable wealth above the exemption threshold. Assuming an infinite horizon, quasilinear utility, a tax rate τ for simplicity, and a discount factor β_i , the utility of this taxpayer is:

$$\sum_{j=t}^{\infty} \beta^{j-t} (w_{i,j} - \tau \hat{w}_{i,j} - \mathbb{I}_{i,j} (v_i^S(w_{i,j} - \hat{w}_{i,j}) + h_i^S(\hat{w}_{i,j-1} - \hat{w}_{i,j}) - V_{i,j})) \\ - (1 - \mathbb{I}_{i,j}) (v_i^D(w_{i,j} - \hat{w}_{i,j}) + h_i^D(\hat{w}_{i,j-1} - \hat{w}_{i,j}))$$

where $\mathbb{I}_{i,j} = 1$ if the taxpayer is below the simplification threshold in year j and 0 otherwise.

For a taxpayer in period t , with reported wealth $\hat{w}_{t-1,i}$ in period $t-1$ and who is still in the simplified filing regime and plans to remain in it in period $t+1$, the interior first-order condition with respect to \hat{w}_{it} is:

$$-\tau + v_i^{S'}(w_{i,t} - \hat{w}_{i,t}) + h_i^{S'}(\hat{w}_{i,t-1} - \hat{w}_{i,t}) - \beta h_i^{S'}(\hat{w}_{i,t} - \hat{w}_{i,t+1}) = 0$$

The taxpayer misreports wealth up to the point where the marginal tax savings τ equal the marginal cost of misreporting, taking into account that misreporting in year t changes the cost of misreporting in year $t+1$ as well. Specifically, reporting lower wealth in year t makes it easier to misreport in year $t+1$, inducing an intertemporal consideration to the misreporting decision that may be absent (or less directly relevant) for income flows.

In period $t+1$, the first-order condition is:

$$-\tau + v_i^{S'}(w_{i,t+1} - \hat{w}_{i,t+1}) + h_i^{S'}(\hat{w}_{i,t} - \hat{w}_{i,t+1}) - \beta h_i^{S'}(\hat{w}_{i,t+1} - \hat{w}_{i,t+2}) = 0$$

Rearranging and combining these first-order conditions yields:

$$v_i^{S'}(w_{i,t} - \hat{w}_{i,t}) + \beta v_i^{S'}(w_{i,t+1} - \hat{w}_{i,t+1}) + h_i^{S'}(\hat{w}_{i,t-1} - \hat{w}_{i,t}) - \beta^2 h_i^{S'}(\hat{w}_{i,t+1} - \hat{w}_{i,t+2}) = \tau(1 + \beta)$$

Result 1: taxpayers below the threshold will start adjusting to the anticipation of crossing the threshold in future years.

A myopic taxpayer ($\beta = 0$) will simply solve the static problem with first-order condition:

$$v_i^{S'}(w_{i,t} - \hat{w}_{i,t}) + h_i^{S'}(\hat{w}_{i,t-1} - \hat{w}_{i,t}) = \tau$$

A non-myopic taxpayer, however, will anticipate how their future ease of misreporting is affected by their current misreporting and engaged in “misreporting smoothing” over time. All else equal, a taxpayer who anticipates having to misreport to cross the threshold in a future year will start misreporting already in previous years, to minimize their misreporting costs.

To see this, suppose that taxpayer i expects their wealth to be above the threshold in year $t + 1$. In year $t + 1$, the taxpayer misreport their wealth to remain below the threshold and report $\hat{w}_{i,t+1} = 2,570K$. They will also do so in $t + 2$ in order to keep staying below the threshold. Knowing this, their decision in year t of how much wealth to report is governed by the FOC:

$$v_i^{S'}(w_{i,t} - \hat{w}_{i,t}) + \beta v_i^{S'}(w_{i,t+1} - 2,570K) + h_i^{S'}(\hat{w}_{i,t-1} - \hat{w}_{i,t}) - \beta^2 h_i^{S'}(0) = \tau(1 + \beta)$$

Therefore, we expect to see taxpayers significantly below the threshold also misreport, and not just taxpayers immediately below it. This is consistent with the systematically lower reported wealth growth rates below the threshold (relative to above) which we observe in the data.

Result 2: Bunching can persist for several years and taxpayers can be pushed above the threshold by a sufficiently large wealth shock.

Let $M_i^k(w_{it})$ denote the continuation value of a taxpayer with wealth w_{it} in regime $k \in D, S$. Taxpayer i will bunch at the threshold if and only if:

$$\begin{aligned} w_{it} - \tau w_S - v_i^S(w_{it} - w_S) - h_i^S(\hat{w}_{i,t-1} - w_S) + V_{i,t} + \beta M_i^S(w_{it}) \\ \geq w_{it} - \tau \hat{w}_{i,t}^* - v_i^D(w_{it} - \hat{w}_{i,t}^*) - h_i^D(\hat{w}_{i,t-1} - \hat{w}_{i,t}^*) + \beta M_i^D(w_{it}) \end{aligned} \quad (12)$$

For a myopic taxpayer, the bunching condition is the classic static bunching indifference equation or inequality. However, a forward-looking taxpayer anticipates the dependency between future misreporting costs and today’s reporting behavior. Note that this bunching indifference condition can hold for several years, as different realizations of wealth occur, and as long as the value from remaining in the simplified regime $V_{i,t}$ is high enough.

We can also see that a high realization of w_{it} will push a taxpayer above the threshold as it will increase the cost of misreporting $v_i^S(w_{i,t} - w_S)$ such that it becomes too costly to remain at the threshold.

Result 3: Taxpayers above the threshold will bunch less, since it requires them to decrease reported wealth which is particularly costly. If the cost h_i^S of reporting negative wealth growth is sufficiently large and steep, taxpayers above the threshold will face a higher cost, all else equal, of locating at the threshold. To see this, consider taxpayers with wealth above and below the threshold, respectively, with the same cost functions and same value V . From the bunching condition (Equation 12), we can see that for a taxpayer with wealth above the threshold, the left-hand side is smaller, making it less likely that the bunching will be appealing. Furthermore, they may even engage in reverse bunching, whereby they will over-report their true wealth to avoid having to report negative wealth growth.

Result 4: There is no detectable bunching at pure tax kinks in the detailed reporting regime because the costs of misreporting imply low elasticities of misreporting. In the limit, if there is a fixed (and large) cost component of misreporting above the threshold, only taxpayers with sufficient incentives to do so will misreport and the observed tax elasticity of misreporting may be low.

Result 5: We will observe bunching at the exemption threshold because of the fixed cost of reporting wealth.

F Dynamic Bunching and Local Average Treatment Effect

In this Section we formally map our dynamic bunching approach to the causal framework from Angrist et al. (1996) to show how our approach allows us to identify a local average treatment effect (LATE). We present and discuss the identifying assumptions.

Let $Z_i^t \in \{0, 1\}$ be an indicator for being affected by a policy in year $t \in \{0, 1\}$ (*eligibility to the treatment*). No one is affected at $t = 0$. The “potentially affected group” is such that $Z_i^1 = 1$ after the reform (and $Z_i^0 = 0$ before the reform). Similarly, $Z_i^0 = 0$ and $Z_i^1 = 0$ for the unaffected (control) group. In our set-up, taxpayers are affected by the reform when prior to the reform they were located in a given range of reported wealth.

Let $D_i^t \in \{0, 1\}$ be an indicator for taxpayer i reporting wealth below a specified threshold amount in year t (*selection into treatment*). For the sake of simplicity, we ignore time superscripts from now on as we consider the post-reform period. We will only use time superscripts to refer to the period prior to the reform.

For all taxpayer i , observed D_i can be written as

$$D_i = D_i(1)Z_i + D_i(0)(1 - Z_i) \quad (13)$$

where $D_i(z)$ are indicators for i reporting wealth below the threshold when $Z_i = z$. As with any potential outcomes framework, for any taxpayer i , only one potential $D_i(z)$ is observed.

Let g_i be taxpayer i 's reported wealth growth rate. g_i can be written as:

$$g_i = g_i(0, 0)(1 - Z_i)(1 - D_i) + g_i(0, 1)(1 - Z_i)D_i + g_i(1, 0)Z_i(1 - D_i) + g_i(1, 1)Z_iD_i \quad (14)$$

where $g_i(z, d)$ denotes i 's potential wealth growth rate when $Z_i = z$ and $D_i = d$. So far we have not made any assumptions.

Let us now assume, for all taxpayer i :

- **Exclusion:** $g_i(z, d) = g_i(z', d) \forall z, z', d$, which allows to define $g_i(d) = g_i(z, d) \forall z, d$
- **Monotonicity:** $D_i(1) \geq D_i(0)$
- **Independence:** $g_i(0), g_i(1), D_i(0), D_i(1) \perp\!\!\!\perp Z_i$

The **exclusion restriction** says that to the extent the policy affects the wealth growth rate, it is only causing a taxpayer i to report a lower growth rate $g_i(1)$ to locate below the threshold (instead of $g_i(0)$). Therefore [Equation 14](#) simplifies to:

$$g_i = g_i(1)D_i + g_i(0)(1 - D_i) \quad (15)$$

The **monotonicity condition** says that the policy only affects bunching in one direction. No taxpayer is induced to report away above the threshold when affected by the reform (i.e., when $Z_i = 1$).

The **independence assumption** says that Z_i is as-good-as-randomly assigned, in the sense of being unrelated to potential outcomes. Although we cannot test the validity of this assumption after the reform, we provide support for this assumption by showing in [Figure 6](#) (Panel A) and [Figure A.18](#) that the distribution of growth rates is identical across all the different groups before the reform (i.e., $g_i(0) \perp\!\!\!\perp Z_i^0$).

Identifying the compliers

Under these conditions, we have:

$$\mathbb{E}[D_i|Z_i = 1] - \mathbb{E}[D_i|Z_i = 0] = \mathbb{P}[D_i(1) > D_i(0)] \quad (16)$$

This tells us that the proportion of compliers is identified by the change in the probability of taxpayers locating below the simplification threshold.

Local Average Treatment Effect

Using the monotonicity and independence assumptions, the average change in growth rate when the policy goes into effect identifies:

$$\mathbb{E}[g_i|Z_i = 1] - \mathbb{E}[g_i|Z_i = 0] = \mathbb{E}[g_i(1) - g_i(0)|D_i(1) > D_i(0)] \times \mathbb{P}[D_i(1) > D_i(0)] \quad (17)$$

which is [Equation 16](#) multiplied by the “*local average treatment effect*” (LATE) of bunching on simplified reporting, $\mathbb{E}[g_i(1) - g_i(0)|D_i(1) > D_i(0)]$. It follows we can divide divide [Equation 17](#) by [Equation 16](#) to identify this LATE in growth rate:

$$\frac{\mathbb{E}[g_i|Z_i = 1] - \mathbb{E}[g_i|Z_i = 0]}{\mathbb{E}[D_i|Z_i = 1] - \mathbb{E}[D_i|Z_i = 0]} = \mathbb{E}[g_i(1) - g_i(0)|D_i(1) > D_i(0)] \quad (18)$$

Estimating the elements of the theoretical framework

For taxpayers affected by the reform, we can directly observe $\mathbb{E}[g_i(1)|Z_i = 1]$. Relying on the validity of our control group, we can estimate $\mathbb{E}[g_i(0)|Z_i = 0]$ as the average reported growth rate among control taxpayers.

We can observe $D_i(1)$, thanks to taxpayers who locate below the simplification threshold after the reform. To identify these taxpayers, we define the concept of *normalized growth rate* $\tilde{g}_i = (w^1 - c)/w^0$ (henceforth NGR, see [subsubsection 4.2.2](#)). By definition, the NGR is the growth rate in excess of the growth rate that would have made taxpayers locate at the simplification threshold c . Immediately $\{D_i(1) = 1\} \iff \{\tilde{g}_i < 0\}$. Therefore, the NGR allows to compute $\mathbb{E}[D_i|Z_i = 1]$

as $\mathbb{P}[\tilde{g}_i < 0 | Z_i = 1]$, which corresponds to the share of affected taxpayers with negative NGR (i.e., change in taxpayers locating below the threshold).

Finally, we cannot observe the remaining part of the denominator of the LATE (i.e., $\mathbb{E}[D_i | Z_i = 0]$). Therefore we use our control group and define a relevant *placebo* threshold (as explained in [subsubsection 4.2.2](#)) for taxpayers in the control group, such that the probability for taxpayers affected by the reform to cross the simplification threshold absent the reform would be identical to that of taxpayers from the control group to cross this placebo threshold.³² Concretely, we compute this placebo threshold so as it is at the same distance from the control group as the actual simplification threshold is for the affected group.³³ We therefore can estimate $\mathbb{E}[D_i | Z_i = 0]$ (i.e., $\mathbb{P}[\tilde{g}_i < 0 | Z_i = 0]$) as the share of taxpayers from the control group whose NGR (with placebo threshold) is negative. More details on the computation of the sample counterparts are presented in [subsubsection 4.2.3](#).

³²It would be irrelevant to look at taxpayers from the control group who locate below the simplification threshold since by construction of the control group, these taxpayers are much further away above the threshold than the taxpayers affected by the reform. Therefore, absent the reform, the probability of taxpayers in the control group crossing the simplification threshold is not comparable with that of the affected taxpayers.

³³Once computed the NGR for the affected and control groups, we show in [Figure A.16](#) that before the reform, for each affected group, the distribution of the NGR is the same for both the affected and the control groups. In [Figure A.17](#), we provide the same evidence for the 2011 reform.