Tax Simplicity and Heterogeneous Learning

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Motivation: The Value of Tax Simplicity

Hard to design policies that fulfill intended goals, minimize hassle, and remain simple enough to be understood.

Complexity of policies can be "regressive"

- If hurts low income, low educated most.
- The very people targeted by transfers may be unable to take advantage of them.
- Often low take-up due to information: sometimes good for revenues, often bad for social welfare.

Tax simplicity = conceptual + practical simplicity.

- "Simple" = easy to understand and handle.
- Low cognitive, low attention, and low logistical burdens.
- Can refer to a given policy (e.g., claim a given subsidy), set of policies, or tax system as a whole.

Research Questions

We ask two related and complementary questions:

For any given policy, do people respond only to the monetary incentives of that policy or does its "simplicity" come into consideration as well?

- How much do they value simplicity?

Is there a costly learning process about complex tax systems?

- Are certain agents quicker to learn and understand?

Setting: Self-Employed in France

Self-employed are good group for studying effects of simplicity:

- Can adjust their own income more easily.
- Direct map between their own understanding and their choices (no "employer" in between).

France is a good quasi-laboratory with valuable policy variation:

- Three fiscal "regimes" for the self-employed which differ in monetary incentives and tax simplicity.
- Regimes have changed a lot over time.
- They impact different agents heterogeneously (even conditional on same income).

New Administrative Data

New tax returns from the French Internal Revenue Service 1994–2012.

- Annual sample of 500,000 households 1994–2012.
- Full population data for 2011 (36 million households).
- Extending as we speak to full population for 2007–2012.

All income streams (individual & household) + demographics.

Sample of 100,000 tax returns per year matched to large-scale survey with education, occupation, social insurance benefits data.

Panel of all businesses (entry, exit, startups).

Strategy and Findings (I): Value of Simplicity

Simpler regimes are subject to eligibility thresholds: "notches".

People "bunch" at those thresholds because they value the fiscal advantages and the simplicity.

The change in payoff an agent faces at the thresholds varies a lot:

- across people (because of activity type & tax bracket) and over time (policy changes).

- Key variations in policy parameters give us many "data moments:"

Use excess mass to back out i) income elasticity (standard) and ii) value of tax simplicity (non standard).

- Find large preferences for tax simplicity: 150 to 600 euros per year (up to 60 hours at net of tax median wage). Small income elasticities.

Strategy and Findings (II): Costly, Heterogeneous Learning

Use variation of thresholds over time and introduction of new regimes to show people take time to learn.

$\Rightarrow$ Costs of tax complexity.

Many, especially low education, low skill, make wrong regime choice and leave a lot of money on the table. They also learn more slowly.

$\Rightarrow$ "Regressive costs of tax complexity."

Related Literature

Taxation and entrepreneurship: Cullen and Gordon (2006,2007), Gentry and Hubbard (2000), Bruce (2000).

Taxable income elasticities: Gruber and Saez (2002), Saez, Slemrod and Giertz (2012).

Determinants of self-employment: Hamilton (2000), Schoar (2010), Adelino, Schoar and Severino (2015), Schmalz, Sraer, and Thesmar (2016).

Bunching methods: Saez (2010), Chetty *et al.* (2011), Kleven and Waseem (2013), Kleven (2016), Best *et al.* (2015), Best and Kleven (2016), Best *et al.* (2015), Chetty *et al.* (2013), Katz and Krueger (2016).

Empirical Studies with French Tax Data: Piketty (...), Landais (2013), Garbinti *et al.* (2016, 2017).

Outline

Outline


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En lutte
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Reuters

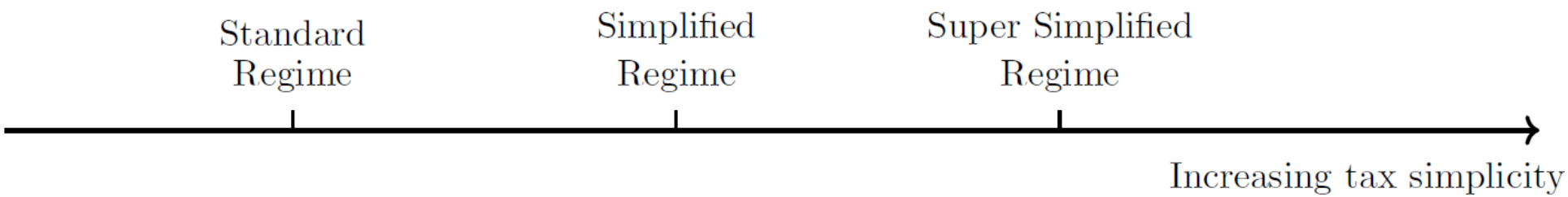
Activity Types:
Different Activities Have Different Policy Parameters

(1) **Industrial and Commercial Services** (I&C Services): construction work, plumbery, carpenters, auto repair, dry cleaning...

(2) **Industrial and Commercial Retail** (I&C Retail): bakeries, butcheries, cheese shops, restaurants, ..

(3) **Non Commercial** (NC:) professional activities, consulting, coaching, translation services, sales agents services, expert services, empty property subleasing, liberal professions (doctors, lawyers in private practices, notaries..).

Tax Simplicity by Self-Employed Regime



Summary of the Self-Employed Regimes

y = revenues. Full formula

$z = z(y, \text{policy parameters})$ = taxable income.

c = operating costs as a % of revenues y.

	(1) Standard (r)	(2) Simplified (m)	(3) Super simplified (f)
Eligibility Graph	None	Revenues $< y^*_{kt}$	Revenues $< y^*_{kt}$ + $FC_{t-2} < f^*$
Income tax & SI contribution base	Net business income $z_r = y_r(1-c)$	Gross revenues × (1- rebate) $z_m = y_m(1-\mu)$	Gross revenues $z_f = y_f$

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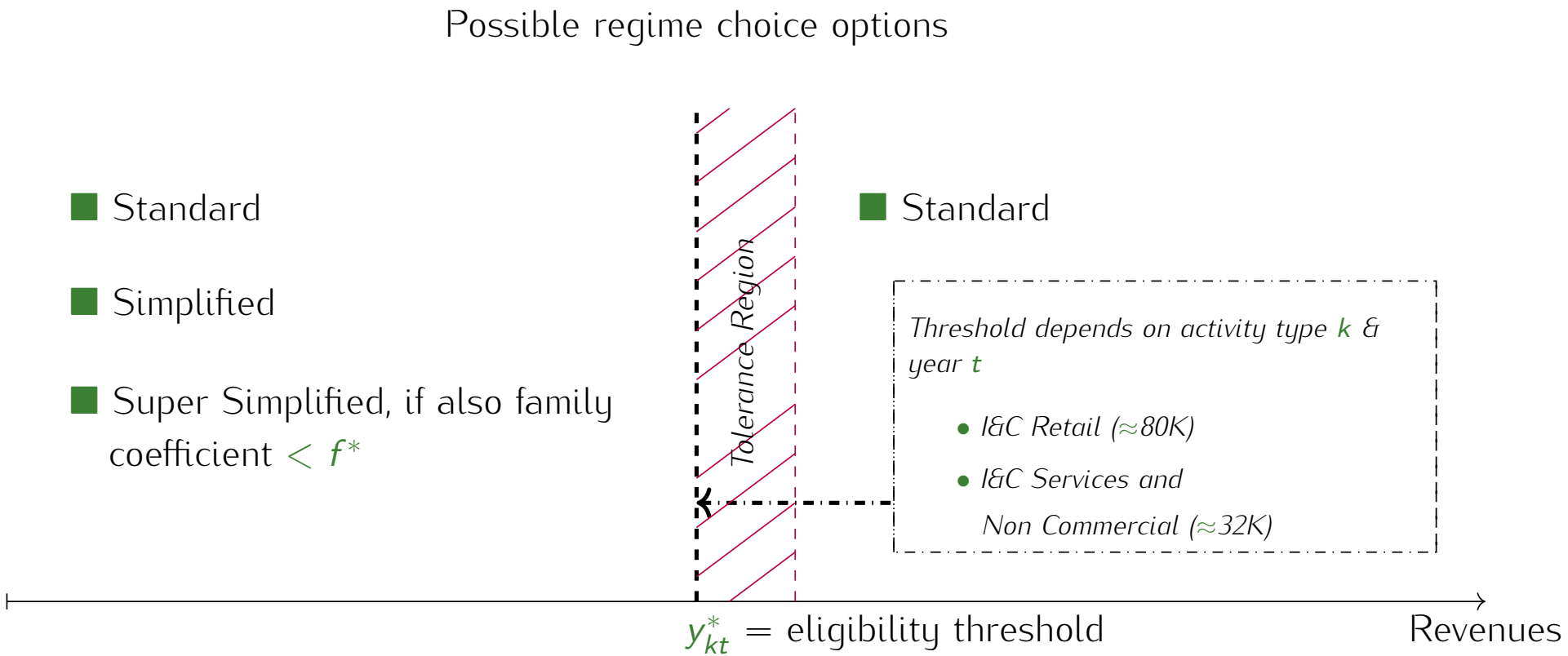
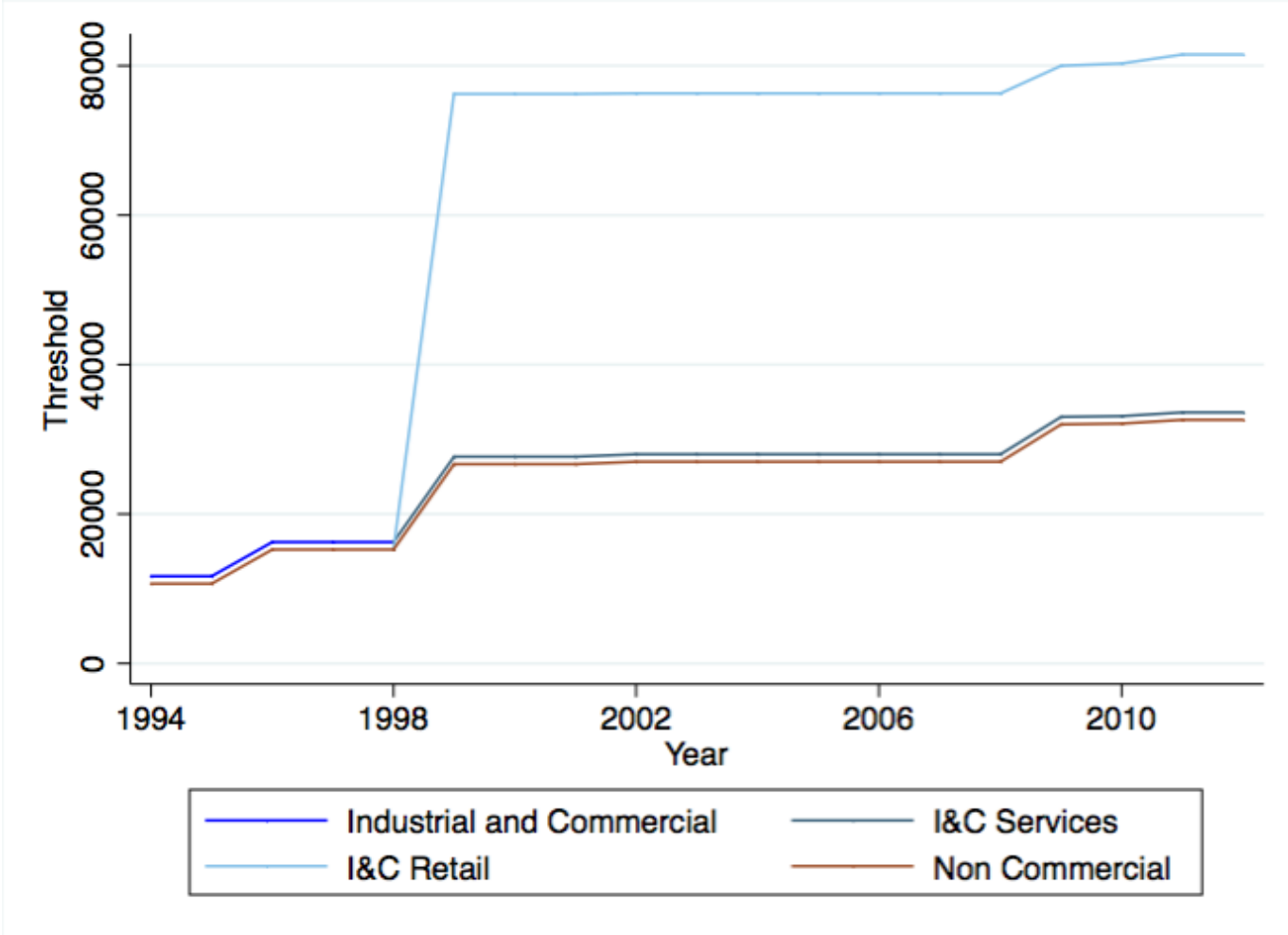
Timing of payments	Annual and separate	Annual and separate	Monthly or quarterly and joint.

Eligibility Thresholds and Regime Choice Options



Back

Eligibility Thresholds Have Changed a Lot Over Time



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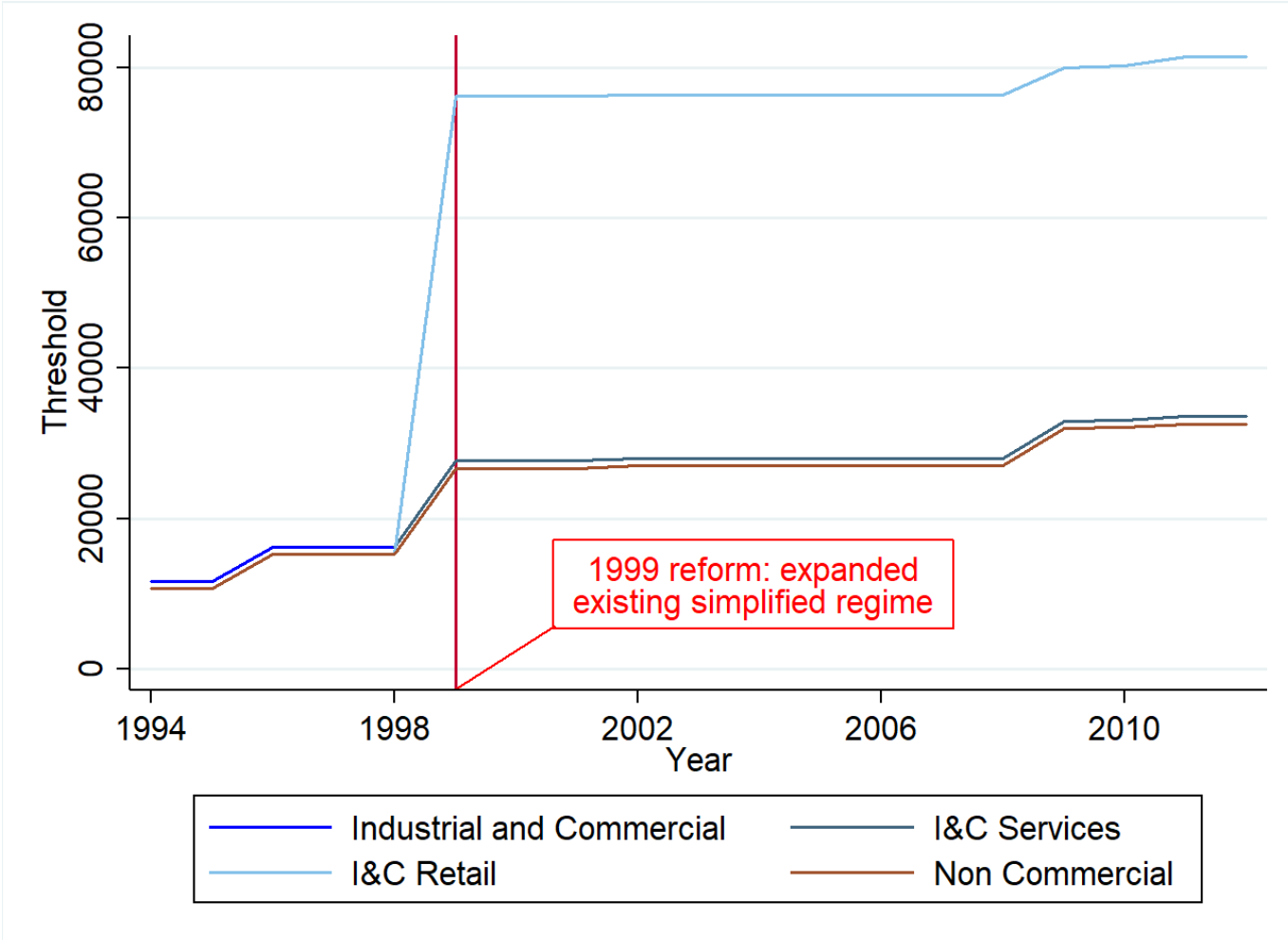

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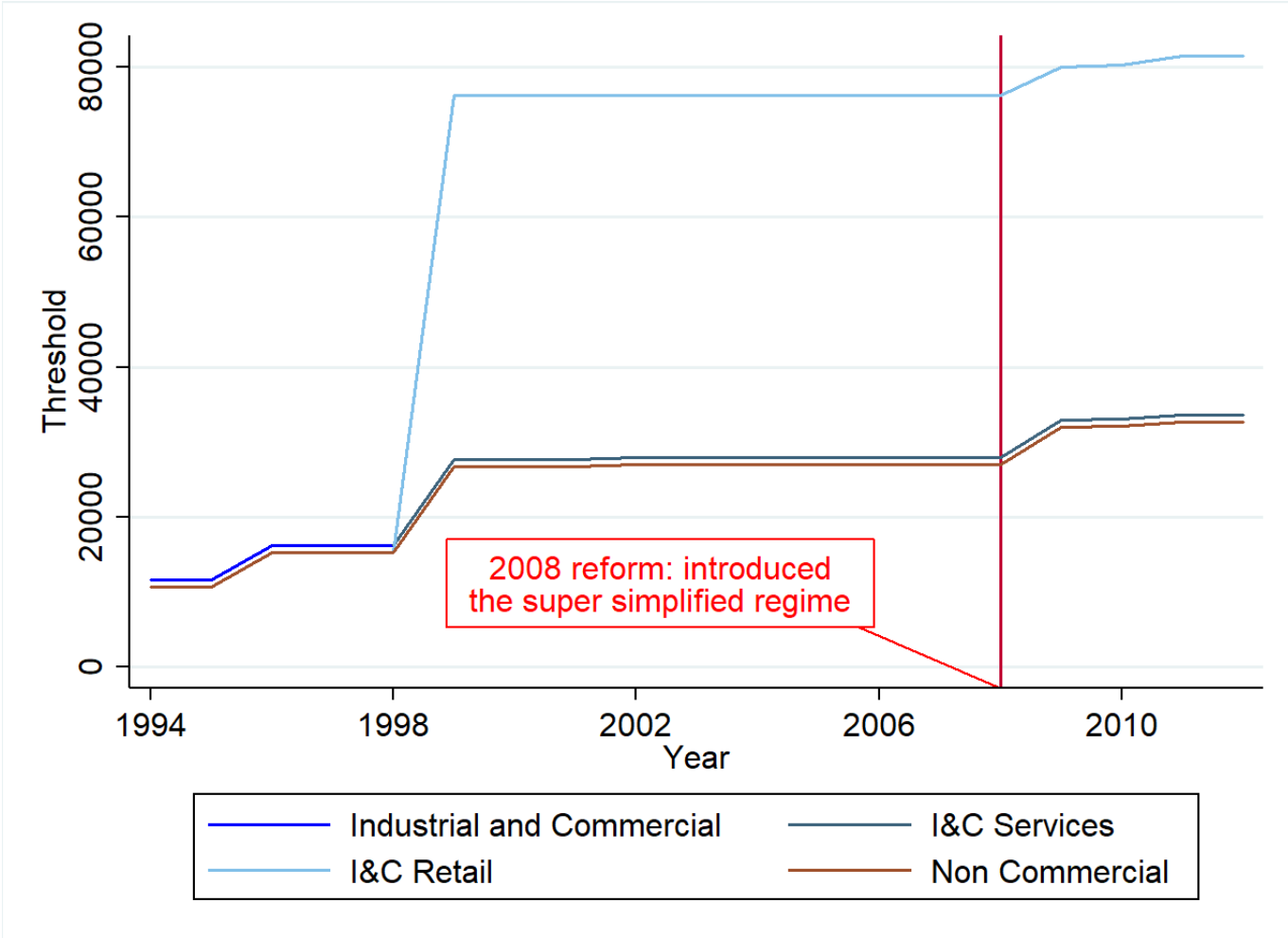

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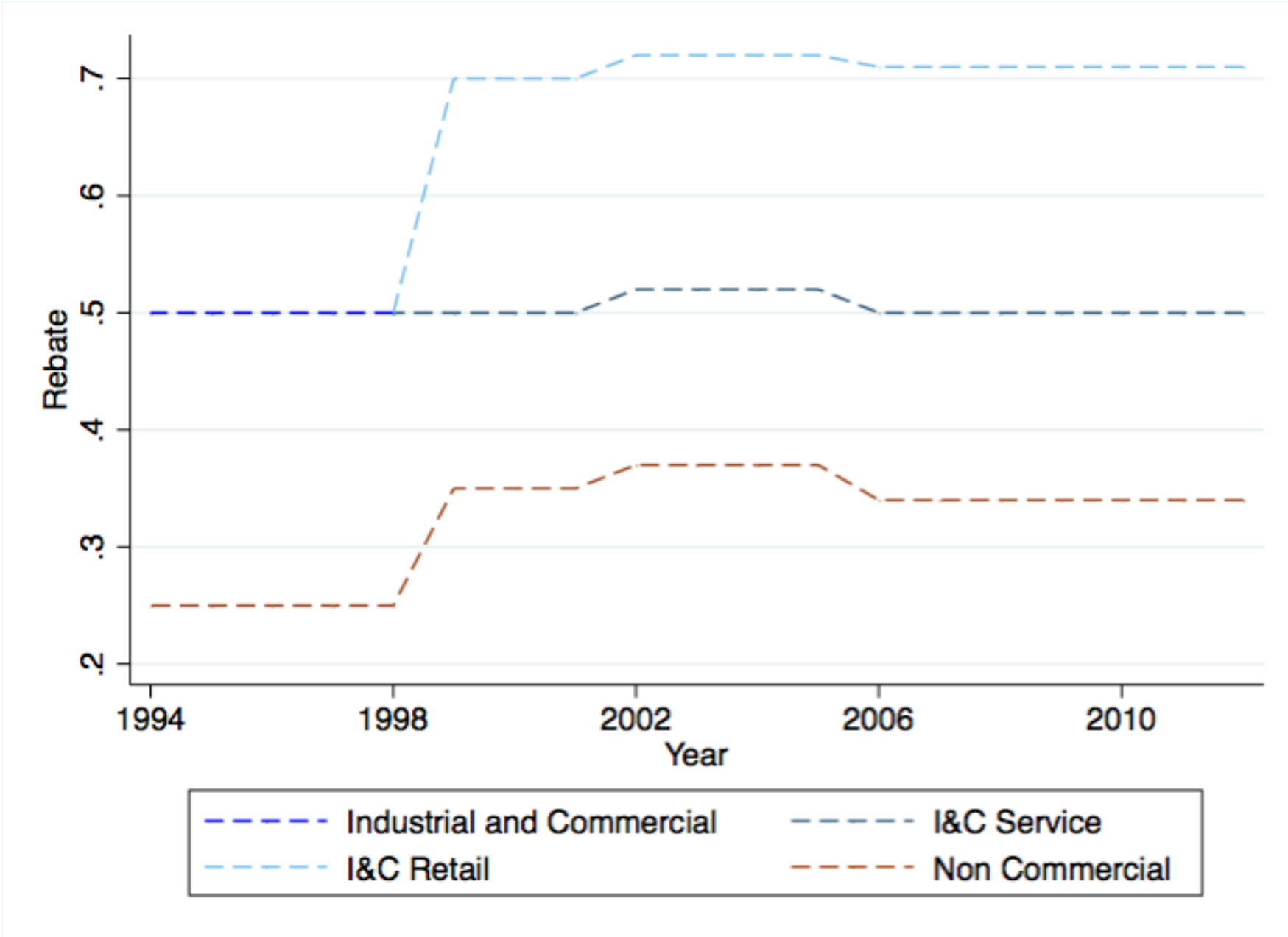
Rebates μ Have Also Changed



French Tax System: Same Income, Very Different Tax Rates.

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2 adults have $N = 2$

+1 kid $N = 2.5$,

+ 2 kids $N = 3$,

+ 3 kids $N = 4$

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Tax paid by agent in bracket M:
$T(FC, N) = N \times [\sum_{m=1}^{M-1} \tau_m \times (\underline{fc_m} - \underline{fc_{m-1}}) + \tau_M \times (fc - \underline{fc_{M-1}})]$

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Same taxable income can imply very different tax rates for different people.

Average Total Tax Rates are Very High: Pays off to Optimize

Panel A: Total Average Tax Rates in the Simplified and Super Simplified Regimes

	Simplified 1999-2008		Super Simplified 2009-2012	
Bracket	I&C Services	Non Commercial	I&C Services	Non Commercial
1 (low)	48.0%	45.0%	23%	20.5%
2 (medium)	52.6%	49.7%	23%	20.5%
3+ (high)	63.2%	60.2%		20.5%

Panel B: Total Average Tax Rates in the Standard Regime

	1999-2008		2009-2012	
Bracket	I&C Services	Non Commercial	I&C Services	Non Commercial
1 (low)	32.9%	31.5%	32.5%	31.1%
2 (medium)	36.0%	34.8%	35.1%	33.5%
3+ (high)	43.3%	42.1%		37.9%

Outline

Evolution of Self-Employment 1994-2012

Are the Self-Employed Different? Demographics

	All	With wage income only	With self-employed income only	With any self-employed income
Age	40	40	49	48
Female	0.47	0.48	0.32	0.33
Married and Civ. Un.	0.50	0.49	0.63	0.62
Children	0.41	0.41	0.39	0.41
Number of Children	0.71	0.71	0.70	0.72
Retired	0.06	0.06	0.17	0.14
Unempl. Benefits	0.11	0.11	0.03	0.05
SI Benefits	0.48	0.48	0.38	0.39
Educated	0.72	0.72	0.73	0.76
Bachelor	0.15	0.15	0.21	0.24
High Skill	0.12	0.11	0.19	0.20
Population (in mill.)	532.7	497	26.3	35.6

Older, less women, more retirees, less perceive unemployment benefits, not more likely to have completed high school, but more likely to have a at least a bachelor.

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Are the Self-Employed Different? Income

	All	With wage income only	With self-employed income only	With any self-employed income
Wage Income	19576	20549	0	6005
SE Income	2004	0	32982	29934
Capital Income	2154	1875	5148	6047
Tax Free CI	1161	1072	2467	2351
Standard of Living	42607	41845	50208	53312
Zero Tax rate	0.16	0.16	0.15	0.14
Low Tax rate	0.32	0.33	0.23	0.22
Medium Tax rate	0.38	0.39	0.31	0.32
High Tax rates	0.14	0.13	0.31	0.32
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More capital income, higher standard of living, higher tax brackets.

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Service vs. Non Commercial Activities (Demographics)

	All	Industrial and Commercial (Retail and Service)	Non Commercial
Age	48	49	46
Female	0.33	0.28	0.41
Married and Civil Union	0.63	0.65	0.59
Children	0.41	0.39	0.44
Number of Children	0.73	0.68	0.80
Retired	0.14	0.16	0.11
Unemp. Benefits	0.05	0.05	0.05
SI Benefits	0.40	0.39	0.41
Educated	0.76	0.67	0.90
Bachelor	0.24	0.10	0.49
High Skill	0.20	0.08	0.43
Population (in mill.)	34.7	22.5	12.6

Non-Commercial: more women, more children, less retirees, and much more educated.

Service vs. Non Commercial Activities (Income)

	All	Industrial and Commercial (Retail and Service)	Non Commercial
Wage Income	6049	5265	7538
SE Income	30505	22718	45376
Capital Income	6133	6040	6552
Tax Free CI	2303	1997	2790
Standard of Living	53642	45317	69444
Zero Tax rate	0.13	0.16	0.08
Low Tax rate	0.22	0.26	0.14
Medium Tax rate	0.32	0.34	0.29
High Tax rates	0.33	0.24	0.49
Population (in mill.)	34.7	22.5	12.6

Non-Commercial are much richer (from self-employed income).

By regime

Outline

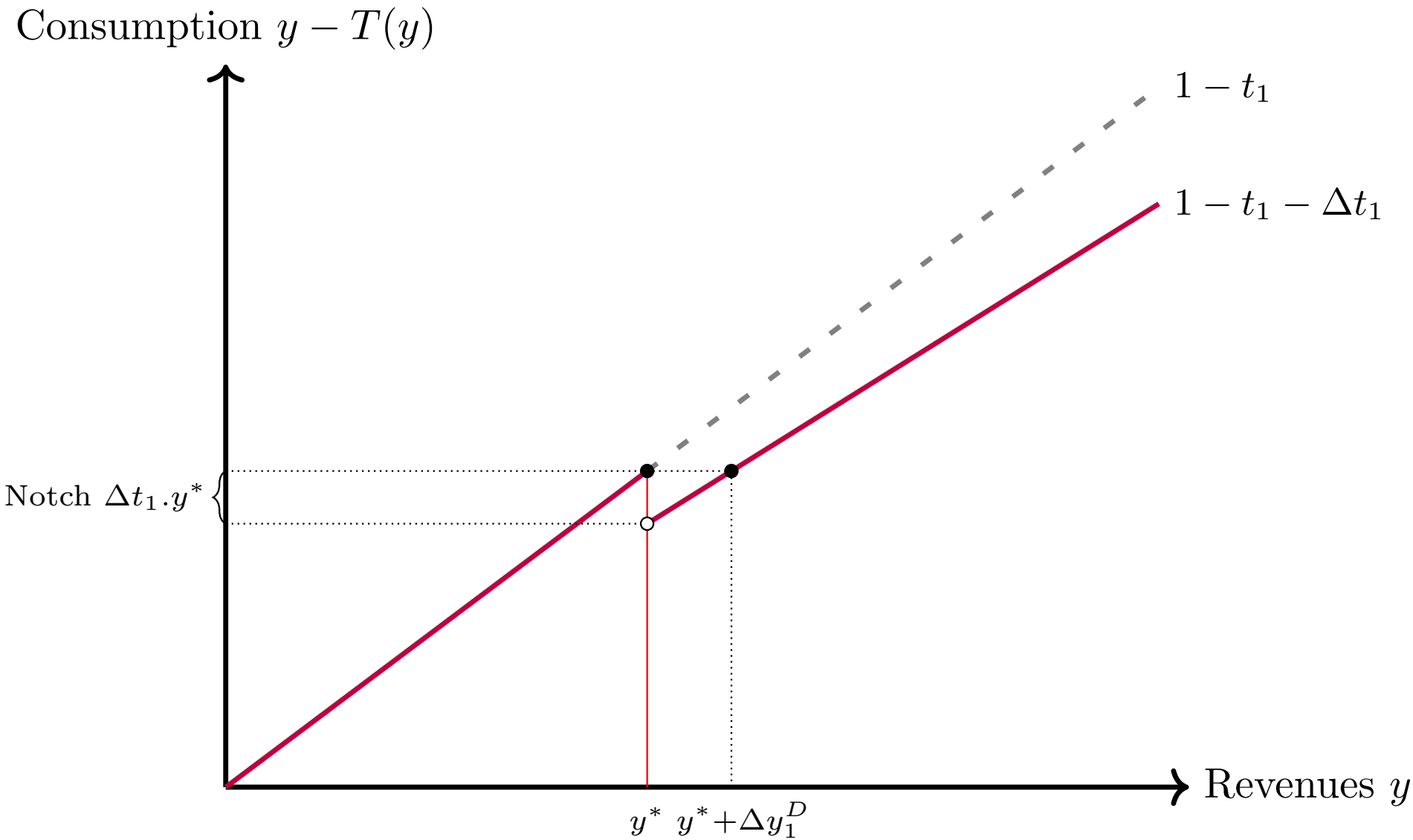
Modeling the Discontinuity at Eligibility Thresholds

- Eligibility thresholds create tax "notches" in both monetary incentives and in simplicity (unlike standard tax notches).
  - Change in tax rates and tax base.
  - Change in tax hassle costs Δa.
- Total liability expressed as a function of revenues y:

$$T(y) = ty + (\Delta a + \Delta t y) I(y > y^*)$$

- Can write: $t = t(\tau^y, \tau^{ss}_m, \mu)$, $\Delta t = \Delta t(\tau^y, \tau^{ss}_m, \tau^{ss}_r, \mu)$.
- These policy parameters differ across people (by activity type or tax bracket) and years.
  - e.g., Δt higher for higher tax bracket agents $\Rightarrow$ larger notch. Appendix

Notch Created by the Eligibility Threshold



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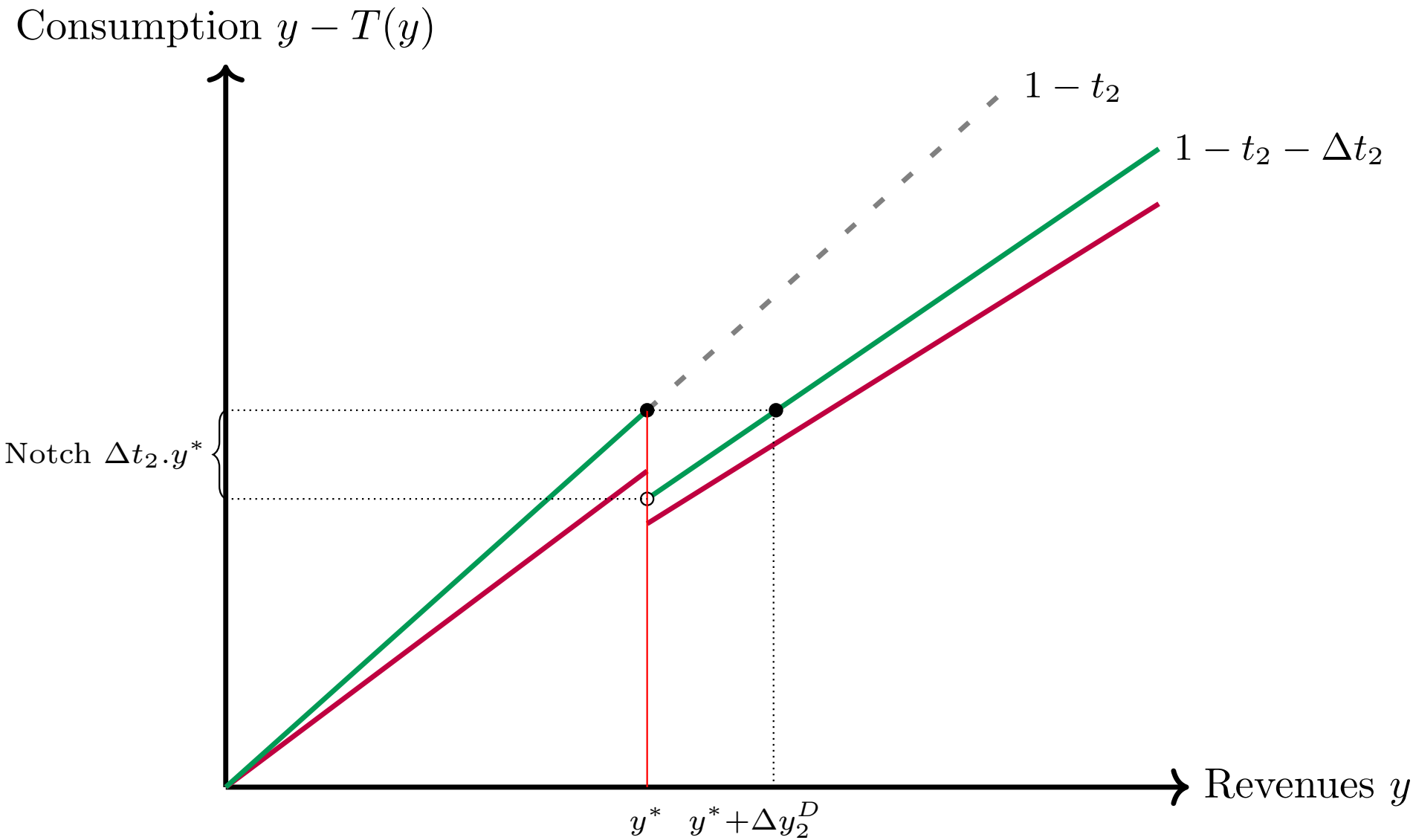

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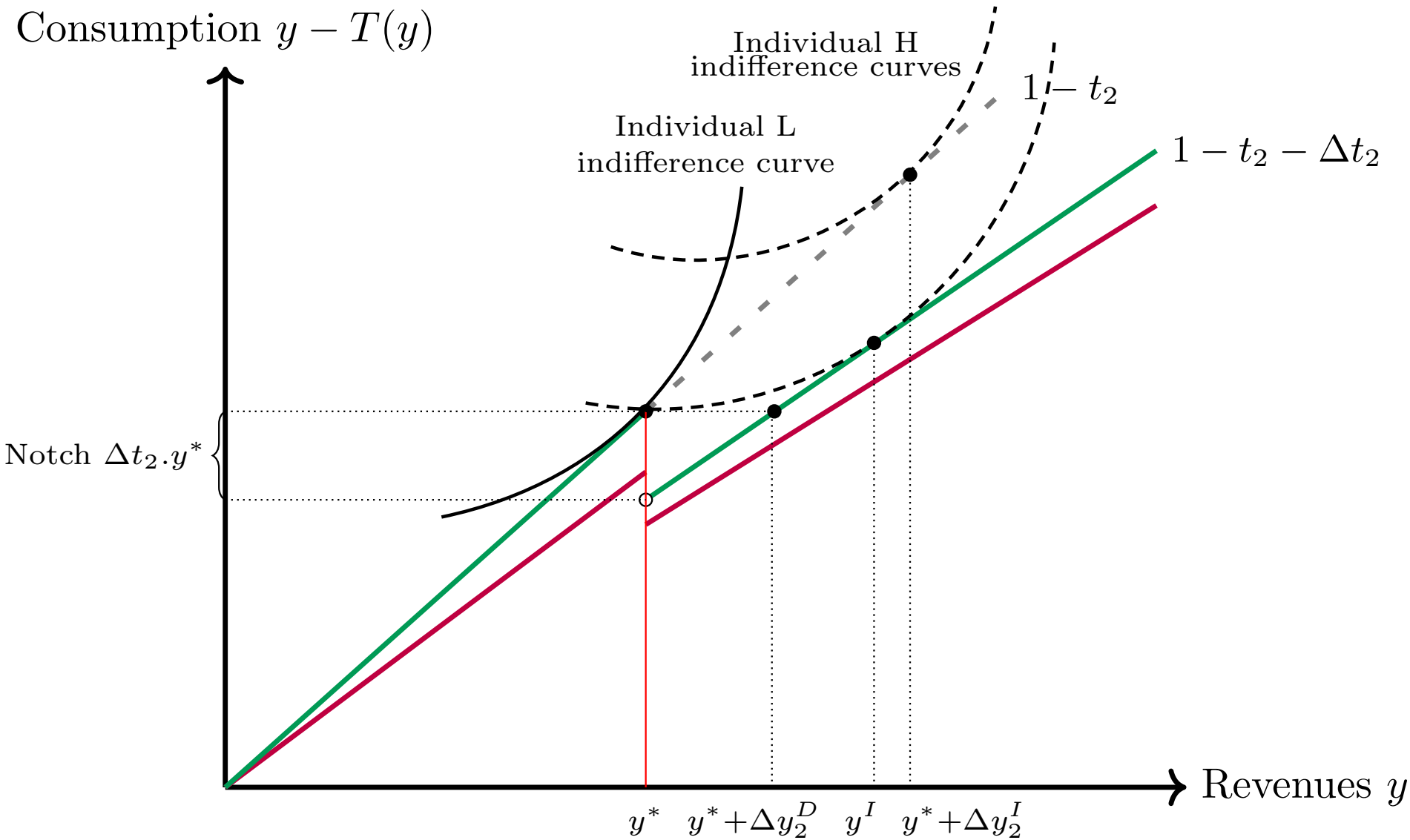
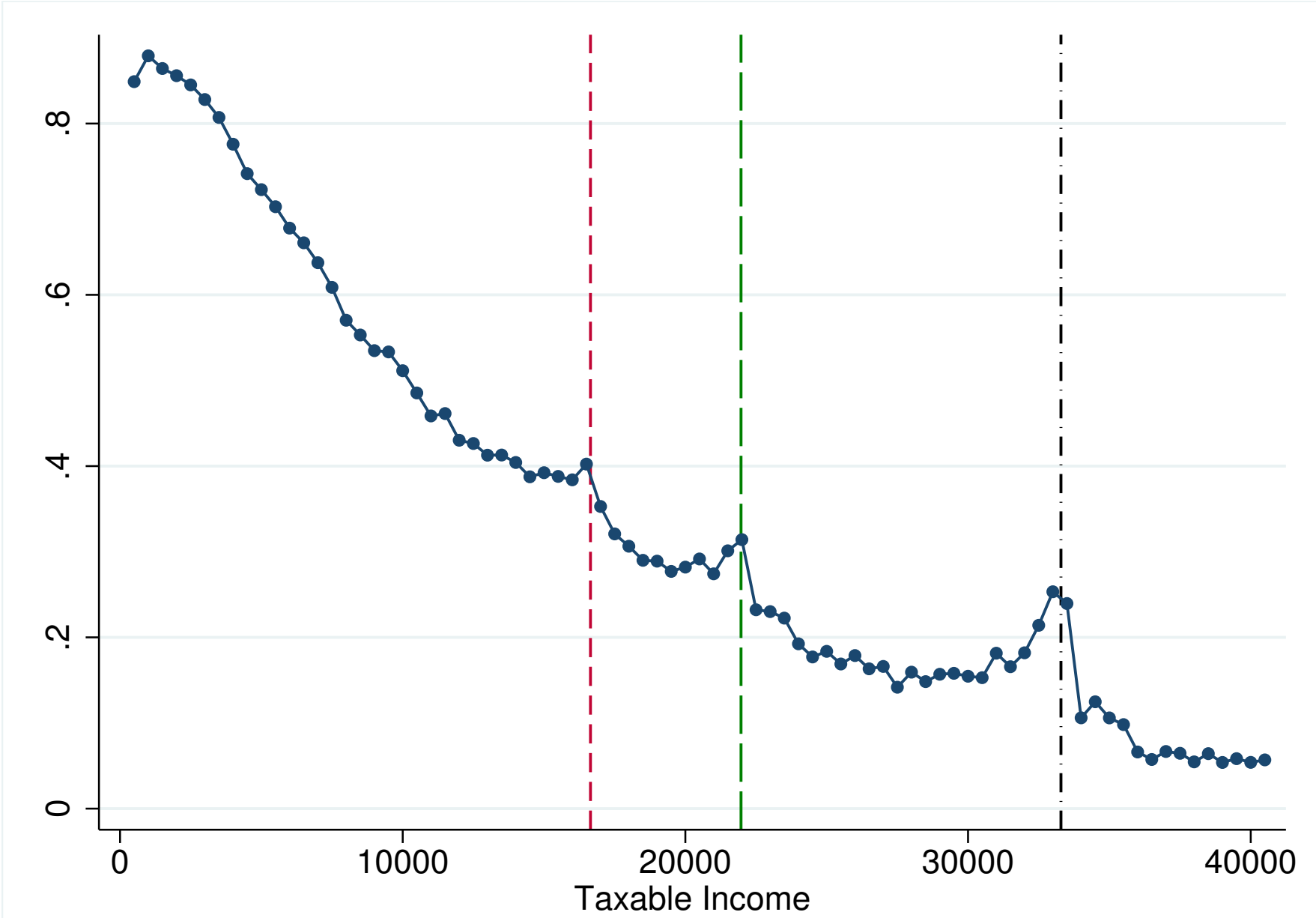
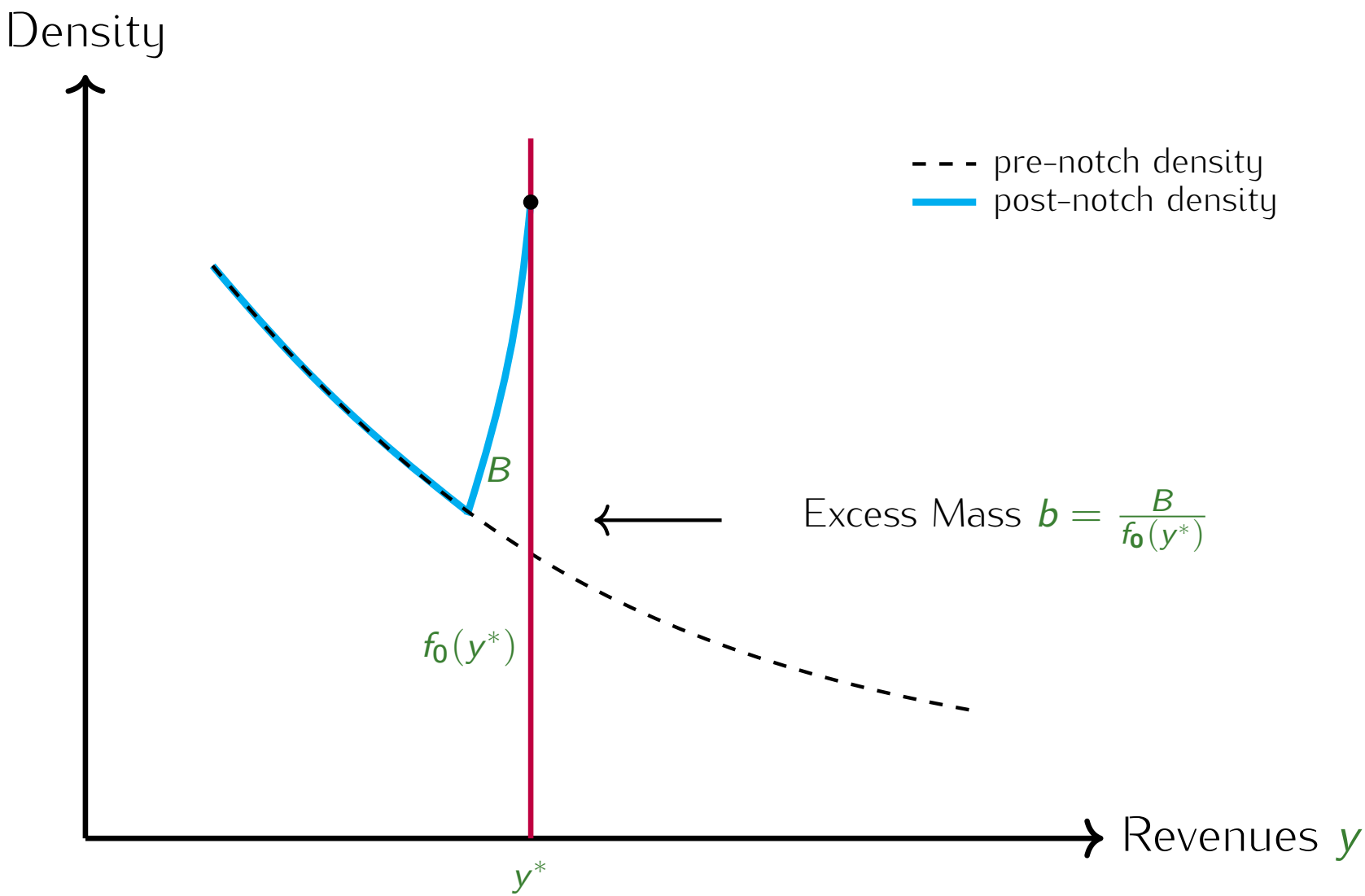


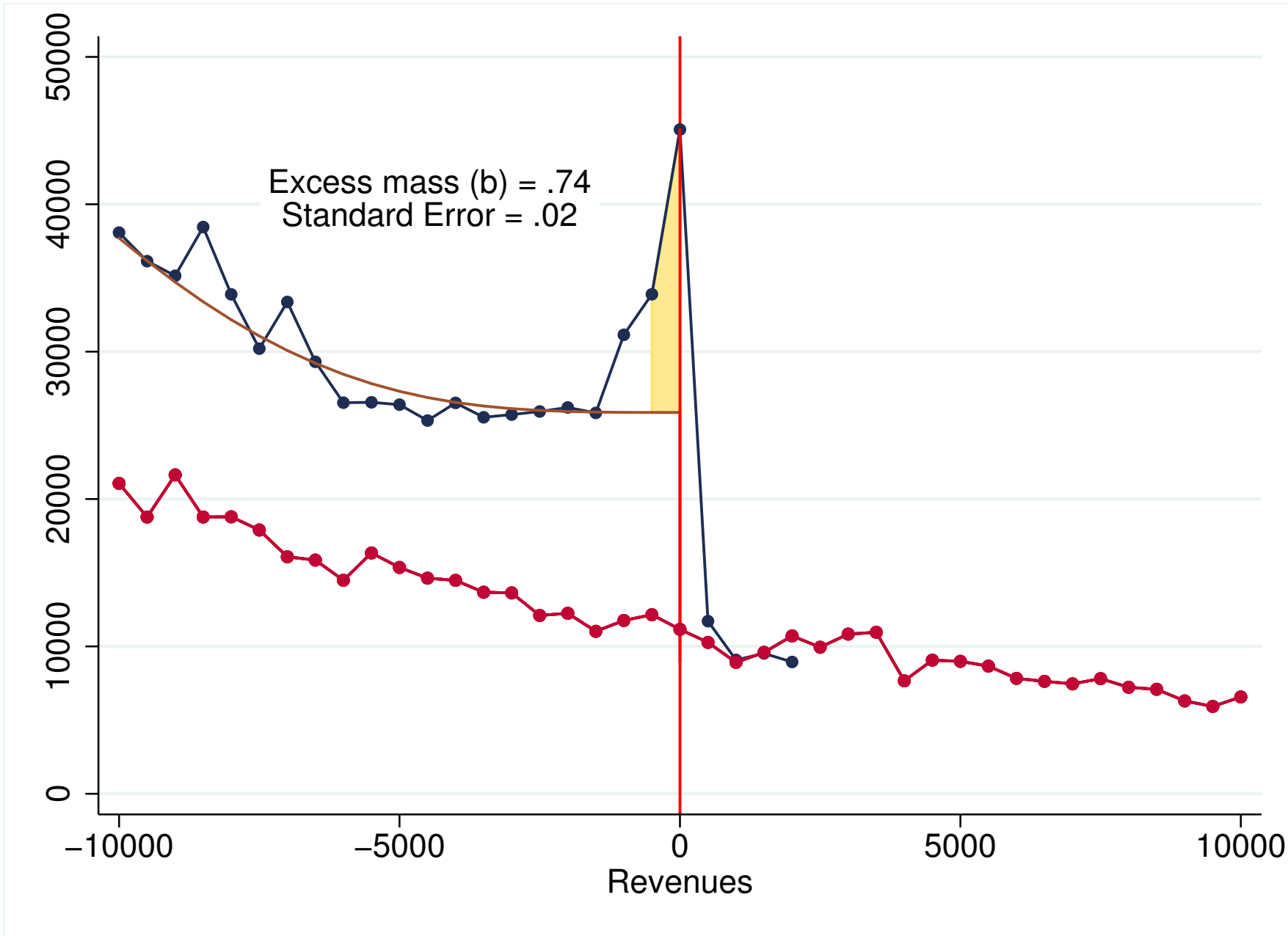
Regime Choice – Share Choosing the Simplified or Super Simplified Regime



Non Standard Excess Mass Method: to the "Left" only

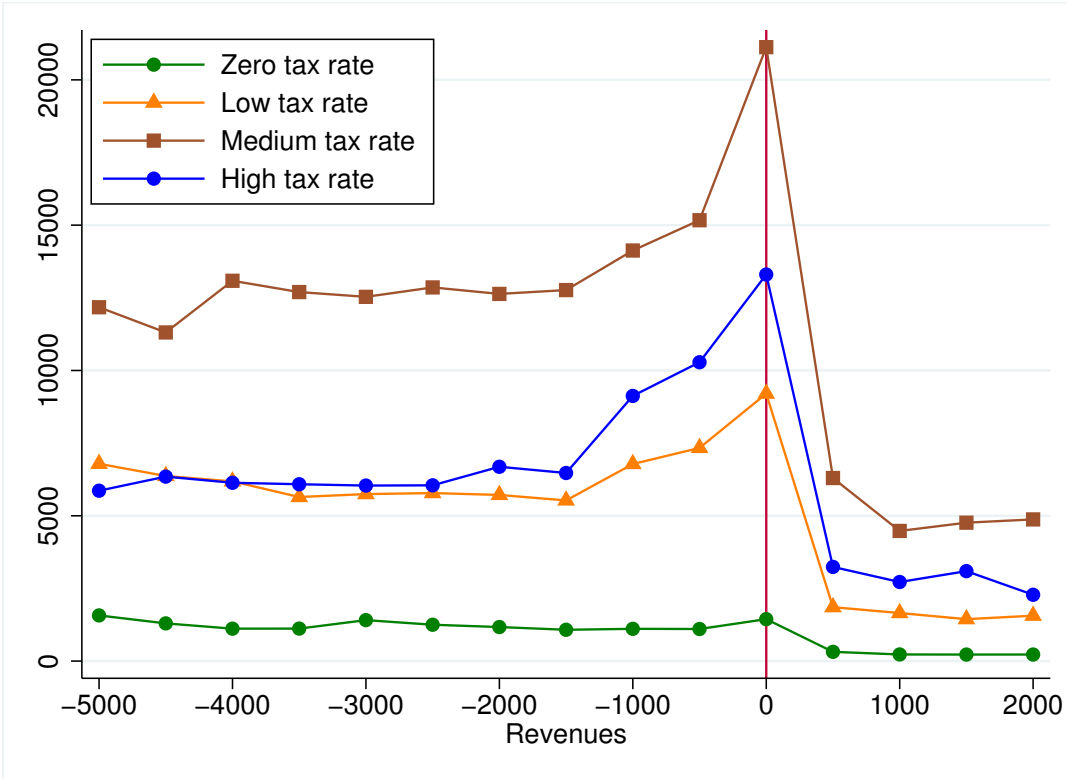


Bunching at the Eligibility Thresholds, 1999-2012



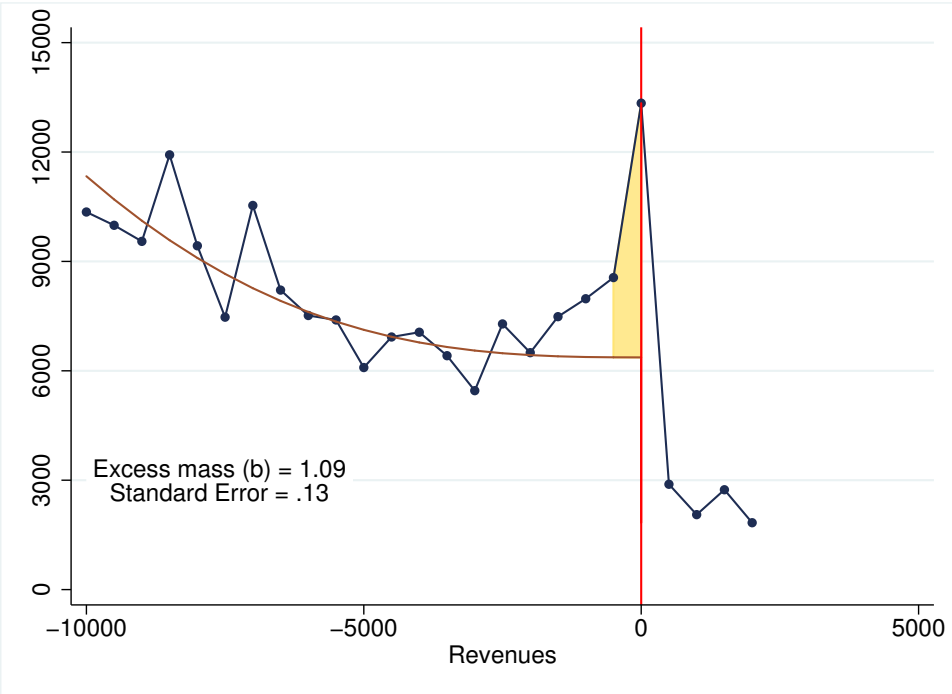
Bunching in the Super Simplified Regime, 2009-2012

Bunching by Tax Bracket

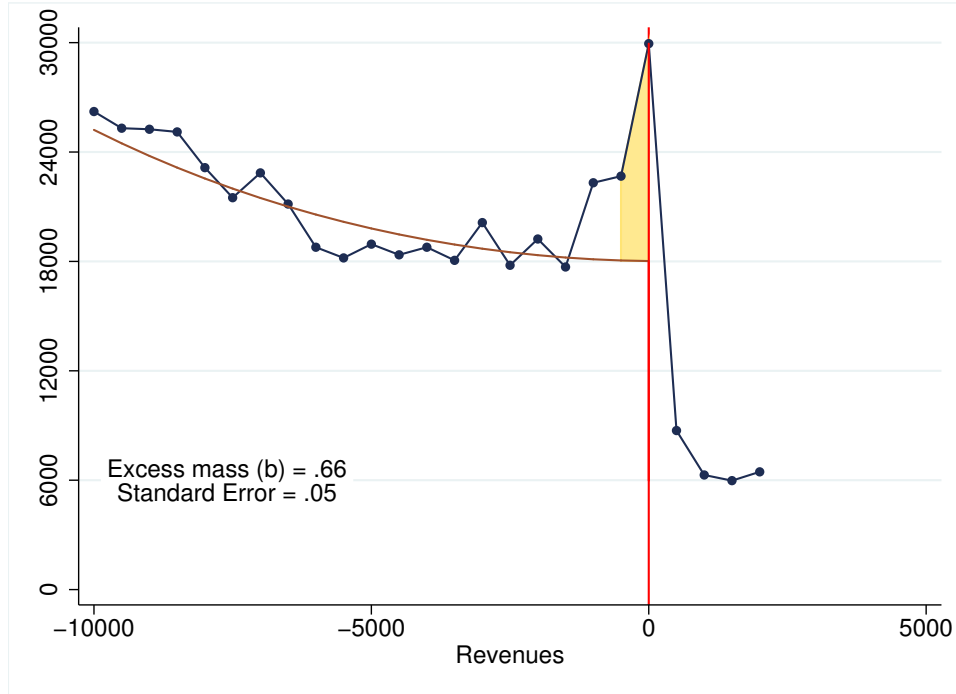


Tax bracket	Excess mass b	Standard error $se(b)$
0 (Zero)	0.37	0.11
1 (Low)	0.76	0.05
2 (Medium)	0.77	0.03
3+ (High)	1.24	0.05

Agents with Additional Income Sources – Salaries

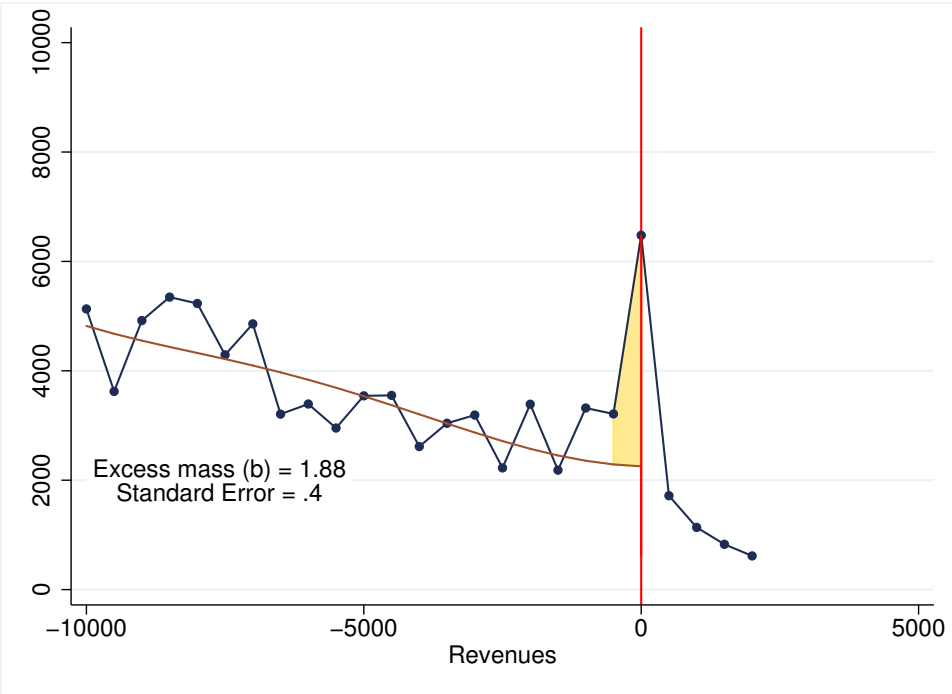


(a) With additional wage income
b=1.09 (0.13)

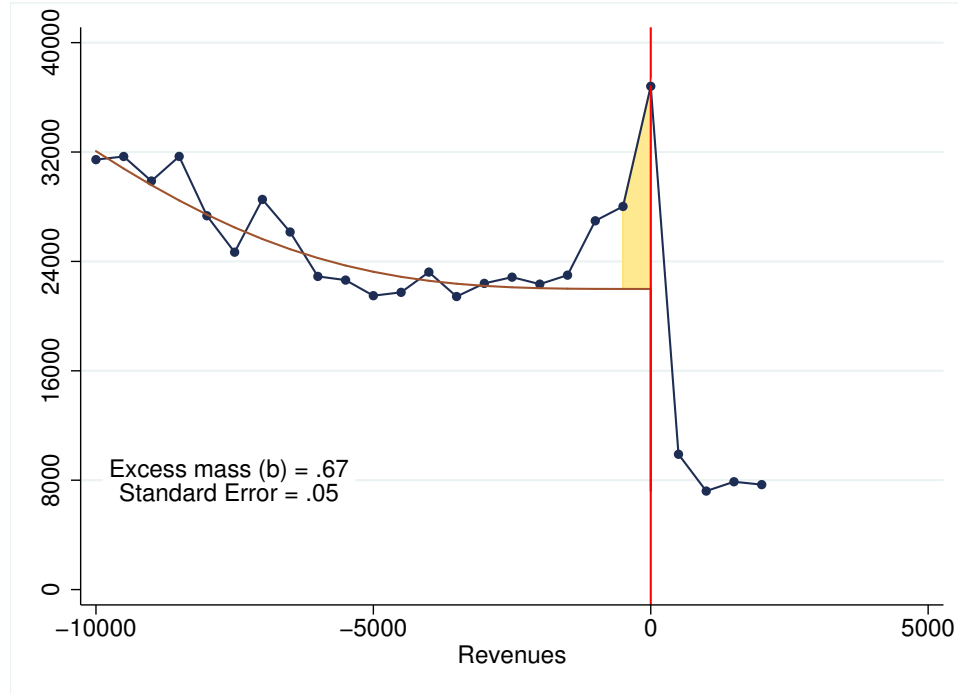


(b) Without wage income
b=0.66 (0.05)

Agents with Additional Income Sources – Pensions

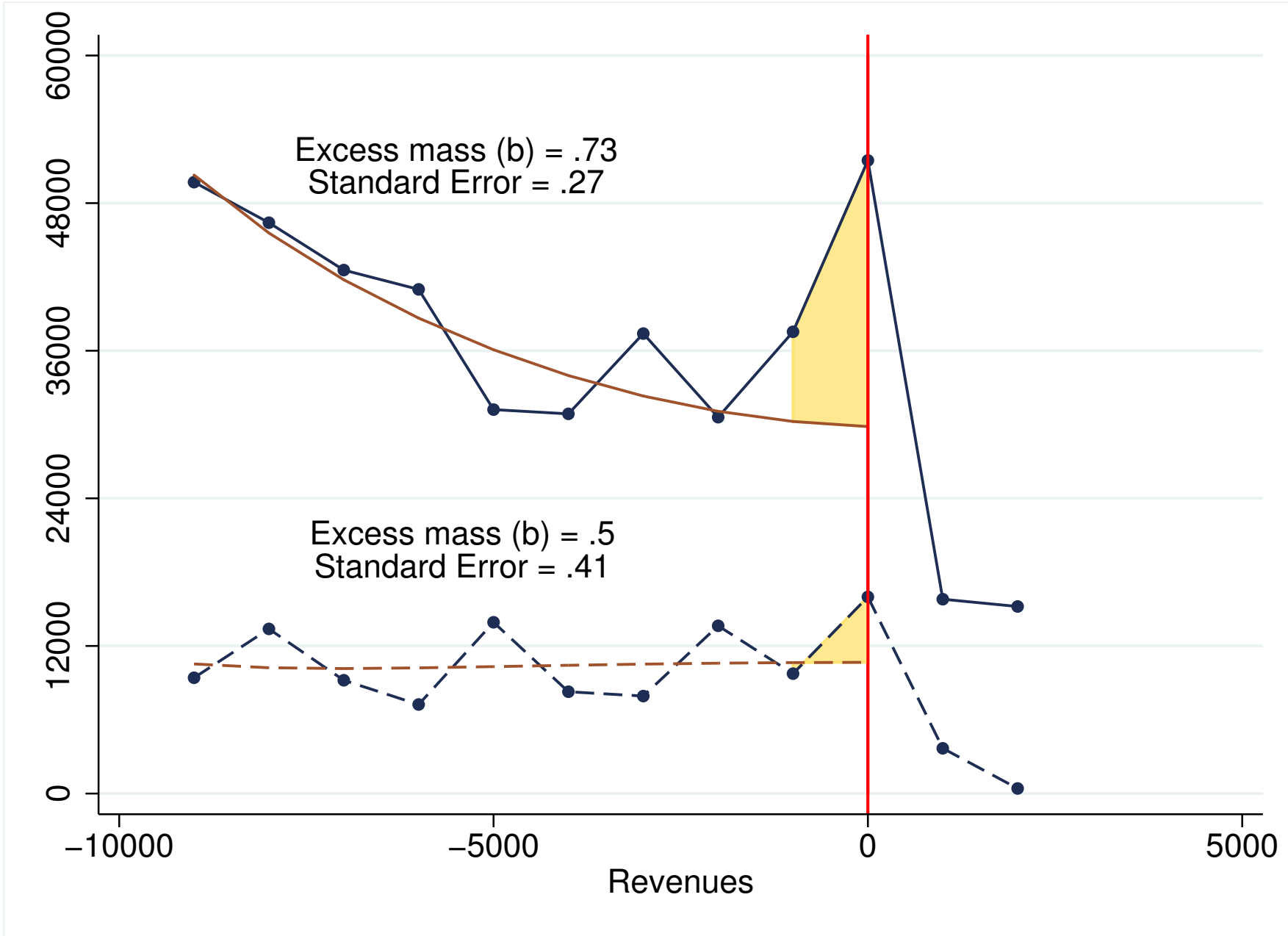


(a) With retirement (pension) income
b=1.88 (0.4)



(b) Without pension income
b=0.67 (0.05)

Bunching by Education Level



Outline

Structural Model

Recall that $B \approx f_0(y^*)\Delta y^*$

$\Rightarrow$ back out total revenue response Δy^* from excess mass B.

An agent's tax liability can generically be written as:

$$T(y) = ty + (\Delta a + \Delta t y) I(y > y^*)$$

Can write: $t = t(c_i, \tau^y, \tau^{ss}_m, \mu)$, $\Delta t = \Delta t(c_i, \tau^y, \tau^{ss}, \mu)$.

For each regime, person, activity, tax bracket: different parameters.

Structural Model (II)

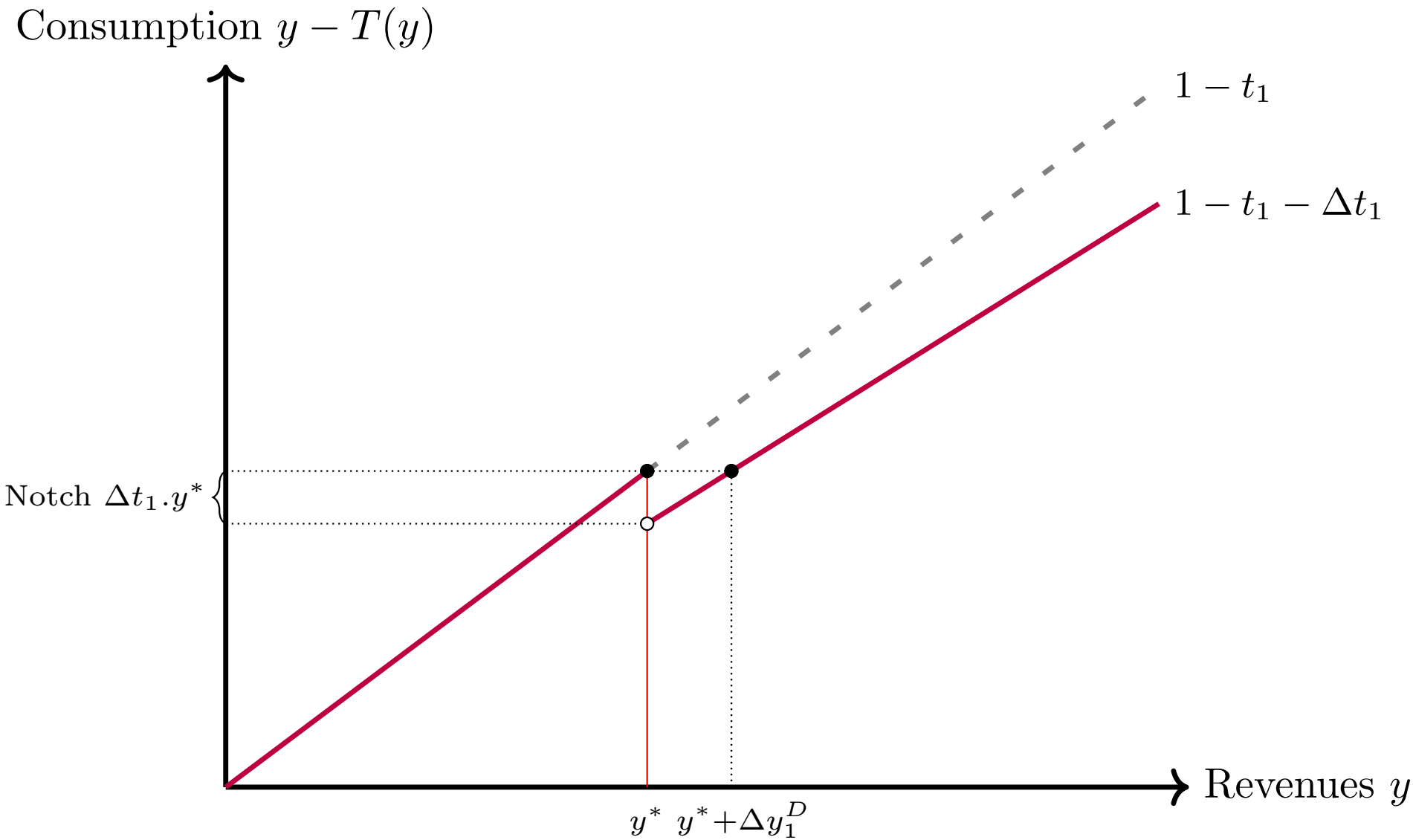
Utility:

$$u_i(y) = y - T_i(y) - h(y, \theta_i) - a_i$$

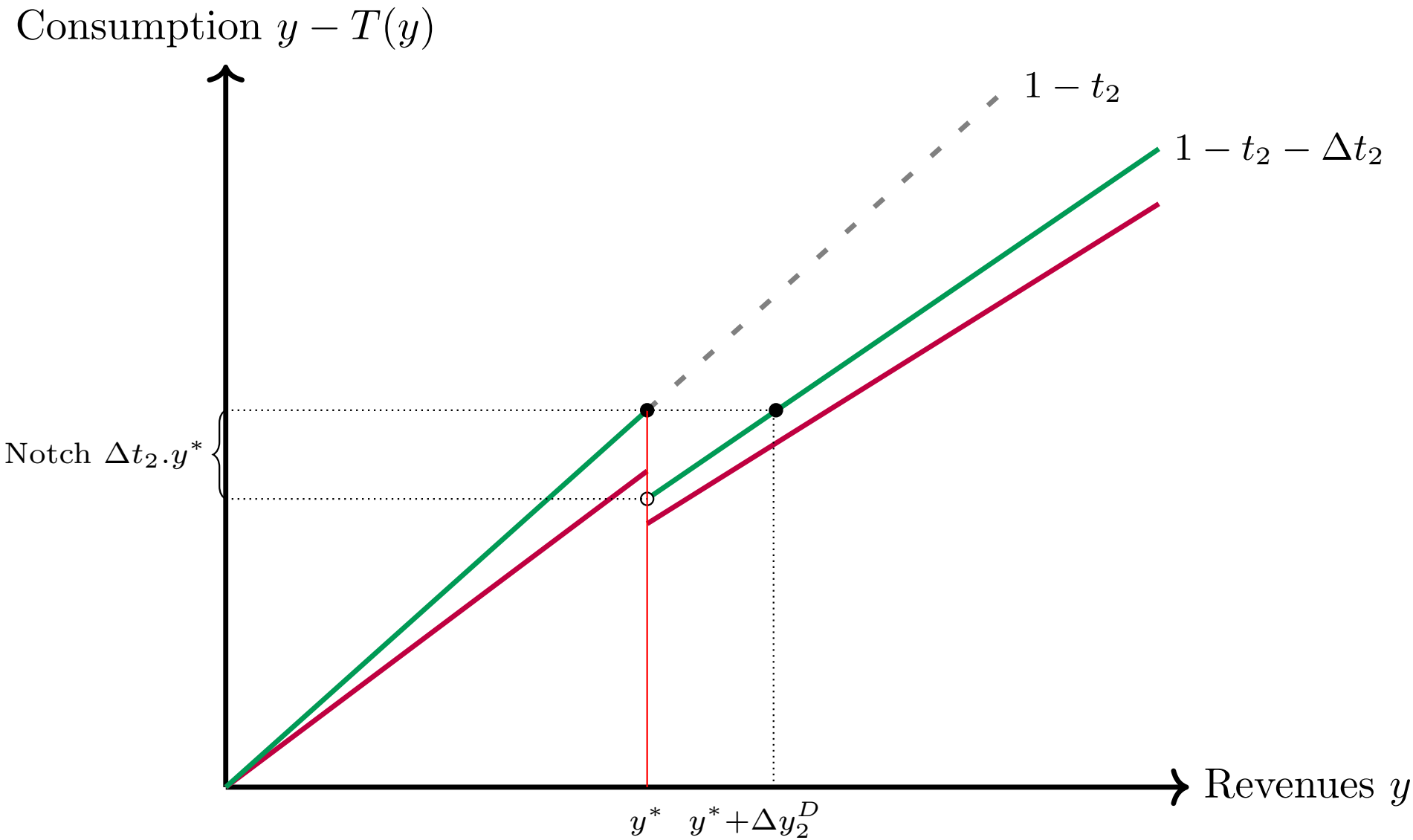
Parameterize disutility of earning revenues (iso-elastic) where θ is "ability type" and ε is income elasticity.

$$h(y, \theta) = \frac{\theta}{1 + \frac{1}{\varepsilon}} \left(\frac{y}{\theta} \right)^{1 + \frac{1}{\varepsilon}}$$

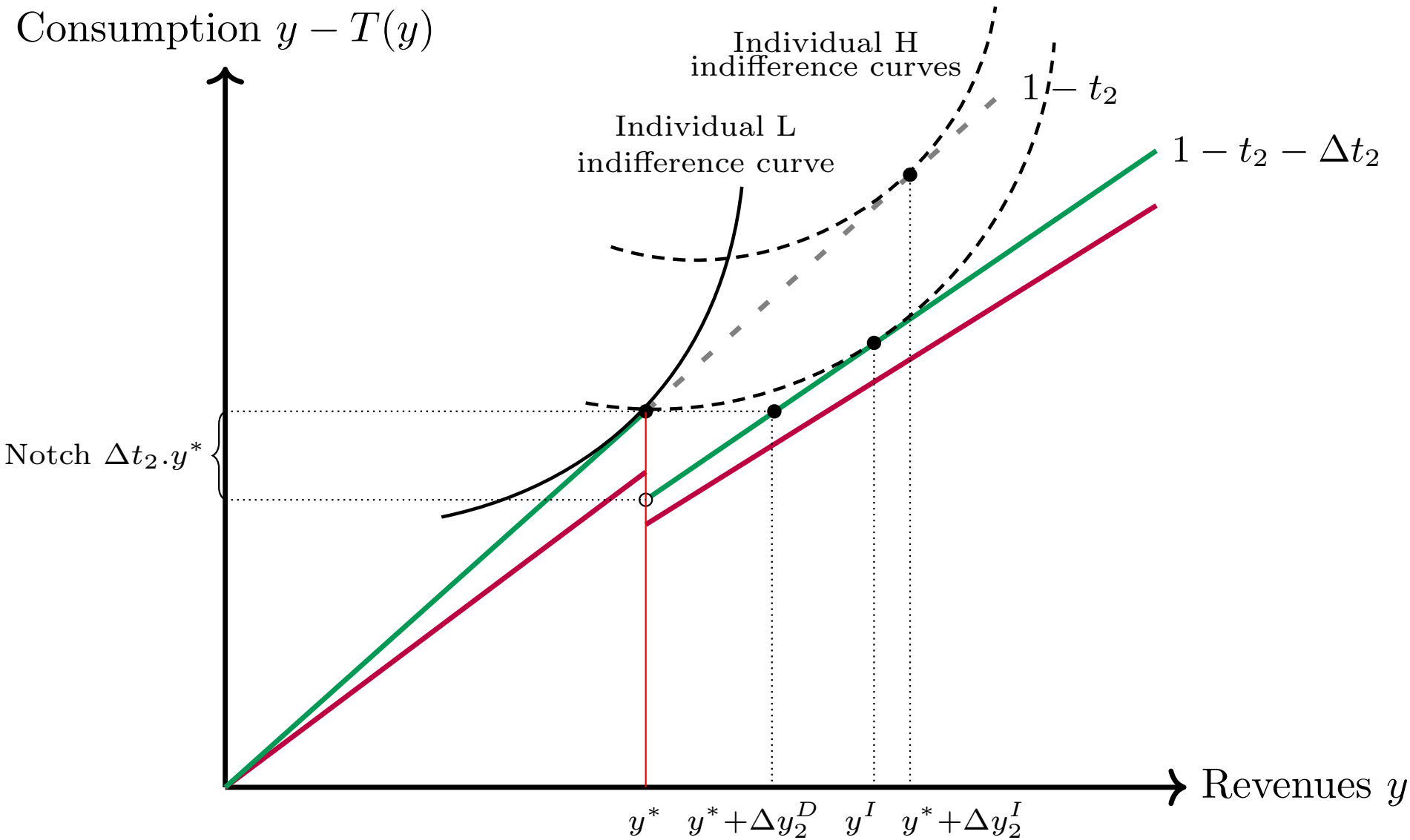
Structural Model: Graphical Illustration



Structural Model: Graphical Illustration



Structural Model: Graphical Illustration



Structural Model (III)

Absent the notch, marginal agent $\theta^* + \Delta\theta^*$ in the simplified regime would have chosen revenue level $y^* + \Delta y^*$ characterized by tangency:

$$y^* + \Delta y^* = (\theta^* + \Delta\theta^*)[(1 - c_m) - \tau_m(1 - \mu)]^{\varepsilon}$$

With the threshold this agent locates exactly at notch y^* and his utility is:

$$u_m^* = y^*(1 - c_m) - \tau_m(1 - \mu)y^* - h(y^*, \theta^* + \Delta\theta^*) - a_m$$

y_r^I is the indifference point such that agent indifferent between being right at threshold y^* or at y_r^I in standard regime, with utility:

$$u_r^I = y_r^I(1 - c_r)(1 - \tau_r) - h(y_r^I, \theta^* + \Delta\theta^*) - a_r$$

Indifference point is characterized by tangency condition in standard regime:

$$y_r^I = (\theta^* + \Delta\theta^*)[(1 - c_r)(1 - \tau_r)]^{\varepsilon}$$

Structural Model (IV)

Indifference condition: $u_r^I = u_m^*$.

Yields equation in ε and Δa, given policy parameters t, Δt and revenue response Δy^* measured in the data and policy parameters $(y^*, t, \Delta t)$.

$$\frac{1}{1+\Delta y^*/y^*}\left[1+\frac{\Delta a/y^*}{1-t}\right]-\frac{1}{1+1/\varepsilon}\left[\frac{1}{1+\Delta y^*/y^*}\right]^{1+1/\varepsilon}$$

$$-\frac{1}{1+\varepsilon}\left[1-\frac{\Delta t}{1-t}\right]^{1+\varepsilon}=0$$

Consider three cases:

Case 1: If people do not value tax simplicity (standard case, upper bound on ε). Also: reduced form approximation.

Case 2: People do not understand/pay attention to monetary incentives (upper bound on a).

Case 3: Full estimation using method of moments.

Case 1: Elasticity Estimates if no Preference for Tax Simplicity Simplified Regime

Activity Type	Cost (% of rebate)	Tax bracket	Earnings Response Δy^*	ATR Jump Δt^*	Reduced-Form Elasticity e_R	Structural Elasticity e
Panel A – Simplified						
I&C Services	0.5	1	730	0.33	0.07*** (0.018)	0.04*** (0.009)
		2	1,090	0.36	0.14*** (0.021)	0.07*** (0.010)
		3	1,930	0.41	0.39*** (0.062)	0.18*** (0.027)
		All			0.18*** (0.031)	0.09*** (0.015)
Non Commercial	0.1	1	1,000	0.70	0.08** (0.038)	0.04** (0.018)
		2	1,240	0.76	0.10*** (0.017)	0.05*** (0.008)
		3	2,420	0.89	0.36*** (0.040)	0.17*** (0.017)
		All			0.22*** (0.029)	0.10*** (0.013)

Revenue responses range from 2.4% to 8.1% of threshold revenues. Notches are distortionary even with small structural elasticities. Optimization frictions would inflate these estimates by $1/(1-f)$.

Case 1: Elasticity Estimates if no Preference for Tax Simplicity
Super Simplified Regime

Activity Type	Cost (% of rebate)	Tax bracket	Earnings Response Δy^*	ATR Jump Δt^*	Reduced-Form Elasticity e_R	Structural Elasticity e
Panel B – Super Simplified						
I&C Services	0.3	1	3,460	0.60	0.56*** (0.099)	0.25*** (0.039)
		2-3	3,660	2.30	0.11*** (0.034)	0.05*** (0.014)
		All			0.26*** (0.056)	0.12*** (0.022)
Non Commercial	0.3	1	3,000	0.36	1.02** (0.487)	0.45** (0.194)
		2-3	3,700	2.63	0.12*** (0.015)	0.06*** (0.006)
		All			0.17*** (0.042)	0.08*** (0.018)

Revenue responses range from 10.8% to 11.5% of threshold revenues.

Case 2: Upper Bound on Tax Hassle Costs for the Simplified Regime

	I&C Services		Non Commercial	
Tax Bracket	Hassle Cost	Hours	Hassle Cost	Hours
1	240	24	420	42
2	390	39	536	54
3+	600	60	600	60

Case 3: Structural Estimation Method

Under full generality, there would be a triplet $(\varepsilon_{nki}, a_{nki}, c_{nki})$ for each regime n, activity k, and tax bracket i.

Assumptions (relaxable): 1) Everything is allowed to differ by regime.

2) Income elasticities are same across activities, but differ by tax bracket.

3) Operating and hassle costs are the same across tax brackets, but differ by activity.

Vector of parameters:

$$\chi_n := (\varepsilon_{n1}, \varepsilon_{n2}, \varepsilon_{n3}, a_{n,\text{I\&C Services}}, a_{n,\text{Non Commercial}}, c_{n,\text{I\&C Services}}, c_{n,\text{Non Commercial}})$$

Loss function:

$$L(\chi_n) = \sum_{m=1}^{M} \frac{1}{M} \left(\hat{\Delta} y^*_{nkit} - \Delta y^*_{nkit}\right)^2$$

where t is groups of years during which no change in policy parameters.

Case 3: Full Structural Estimation
Tax Hassle Costs and Elasticities by Regime Type

Cost I&C Services (% of rebate)	Cost Non Commercial (% of rebate)	Hassle Cost I&C Services a_S	Hassle Cost Non Commercial a_{NC}	Tax bracket	Structural Elasticity e
Panel A – Simplified Regime					
0.5	0.1	315	456	1 2 3	0.01 0.02 0.06
Panel B – Super Simplified Regime					
0.3	0.3	162	648	1 2-3	0.08 0.01

Case 3: Full Structural Estimation
Tax Hassle Costs and Elasticities by Regime Type

Cost I&C Services (% of rebate)	Cost Non Commercial (% of rebate)	Hassle Cost I&C Services a_S	Hassle Cost Non Commercial a_{NC}	Tax bracket	Structural Elasticity e
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0.3	0.3	162	648	1 2-3	0.08 0.01

Case 3: Full Structural Estimation
Tax Hassle Costs and Elasticities by Additional Income Sources

Cost I&C Services (% of rebate)	Cost Non Commercial (% of rebate)	Hassle Cost I&C Services a_S	Hassle Cost Non Commercial a_{NC}	Tax bracket	Structural Elasticity e
Panel C – By Additional Income Sources					
With salaried income					
0.5	0.2	304	145	1	0.01
				2	0.03
				3	0.07
Without salaried income					
0.5	0.2	149	144	1	0.02
				2	0.01
				3	0.04
With pension income					
0.5	0.2	305	580	1-2-3	0.02
Without pension income					
0.5	0.2	150	299	1-2-3	0.01

Case 3: Full Structural Estimation
Tax Hassle Costs and Elasticities by Additional Income Sources

Cost I&C Services (% of rebate)	Cost Non Commercial (% of rebate)	Hassle Cost I&C Services a_S	Hassle Cost Non Commercial a_{NC}	Tax bracket	Structural Elasticity e
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				2	0.01
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				3	0.04
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0.5	0.2	305	580	1-2-3	0.02
Without pension income					
0.5	0.2	150	299	1-2-3	0.01

Outline

Costly Learning

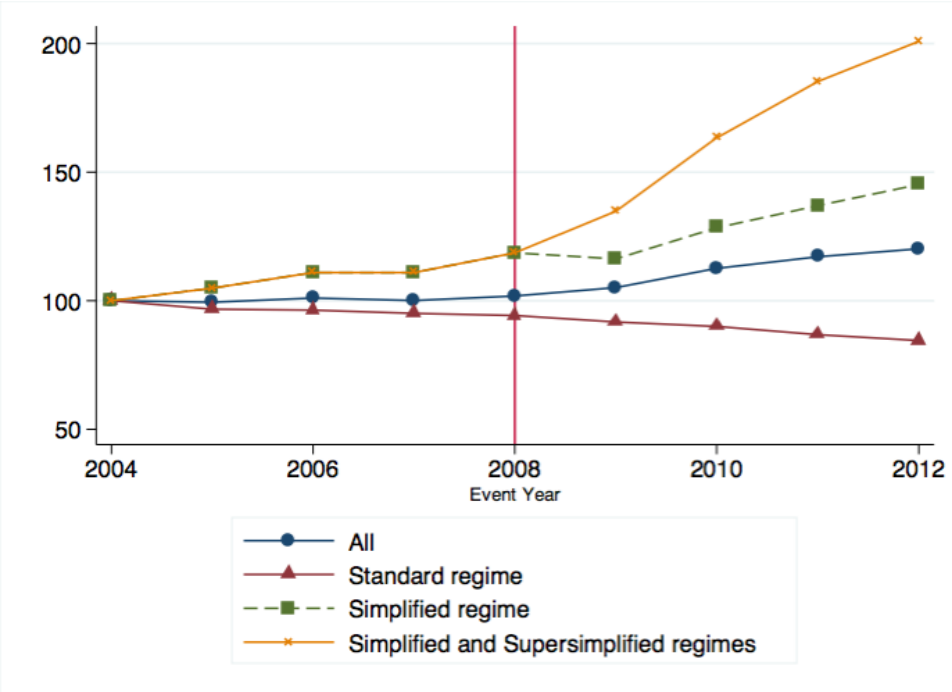
People value simplicity in a given regime.

Let us now zoom out and look at the system as a whole and more precisely at what happens when policies change over time.

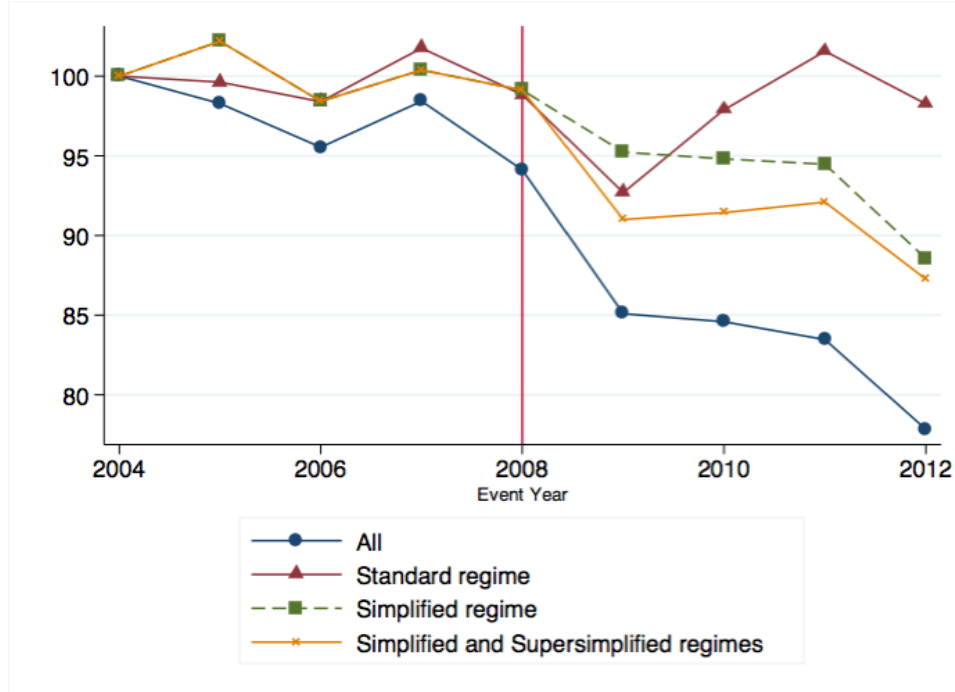
First, let's look at the introduction of the new super simplified regime after 2008 and at the sluggish adjustments to it.

Second, let's show more generally that people take time to learn.

Slow Adjustment to the New Regime Introduction (2008 Reform)

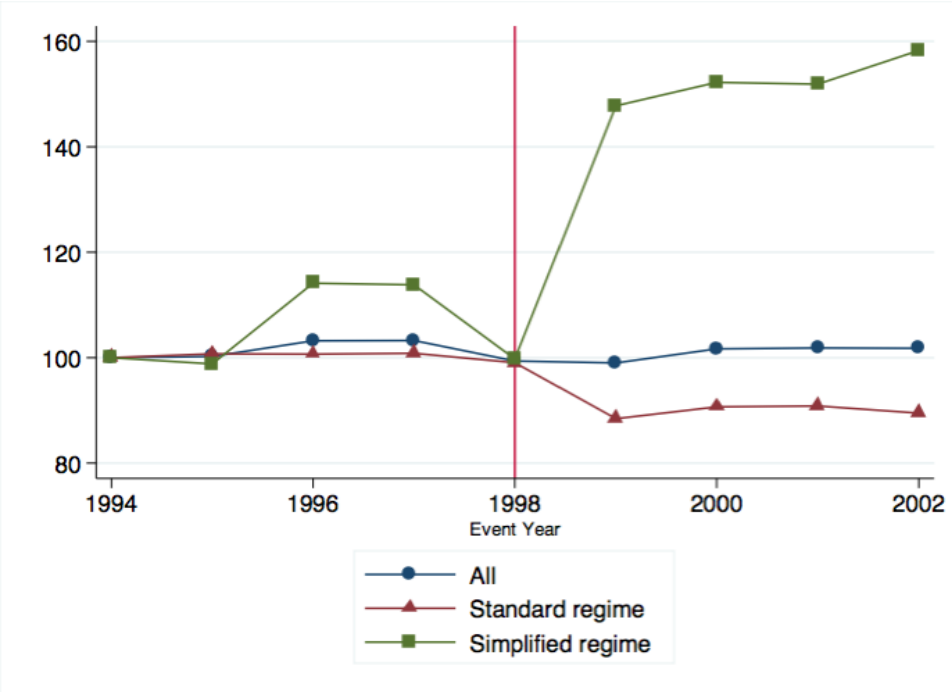


(a) Number of self-employed agents

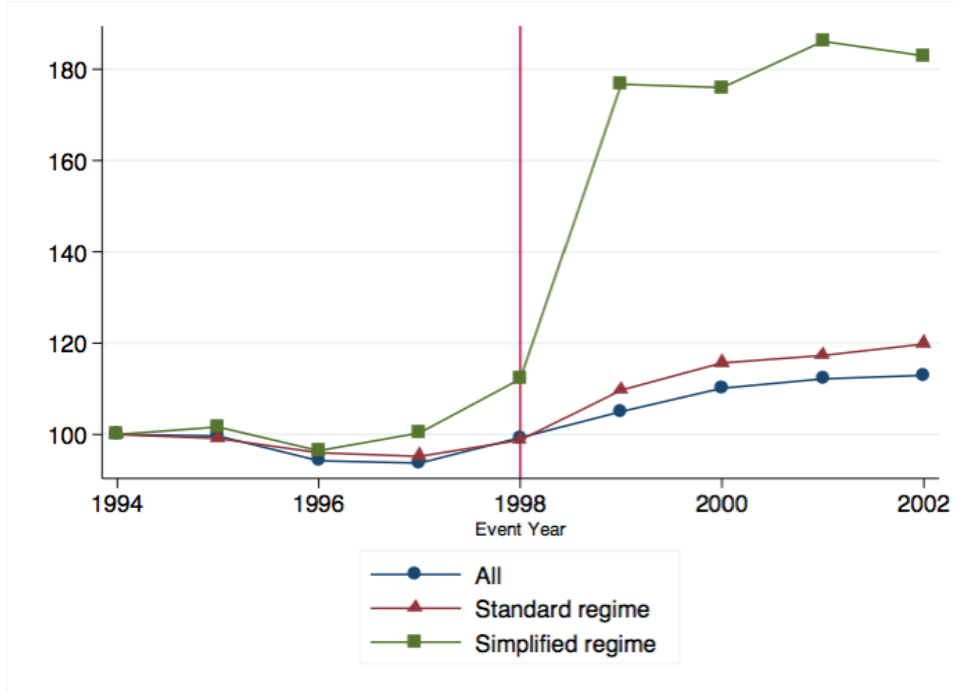


(b) Average income per self-employed agents

Fast Adjustment to Expansion of Existing Regime (1999 Reform)

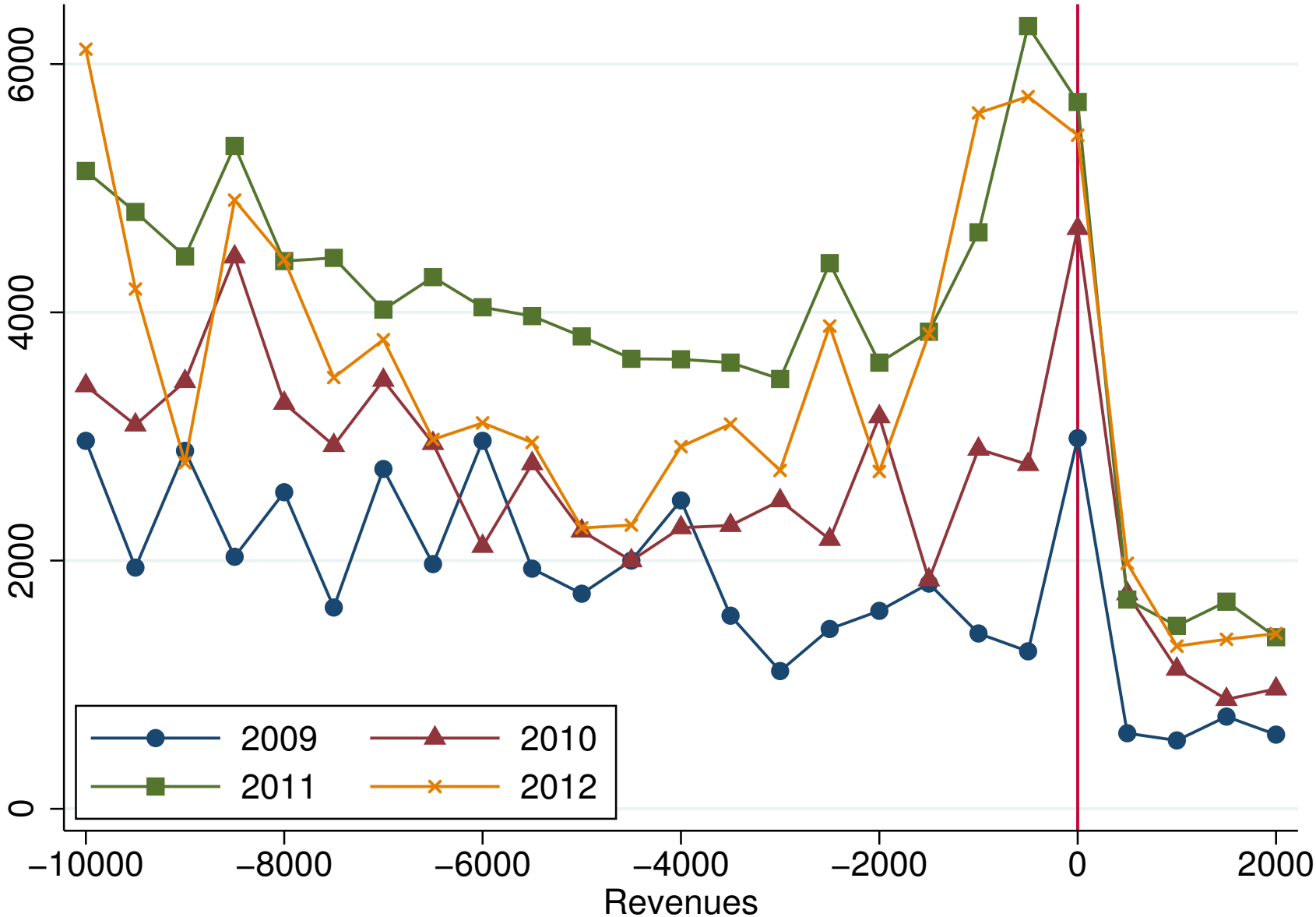


(a) Number of self-employed agents



(b) Average income per self-employed agents

Bunching After the Introduction of the Super Simplified Regime

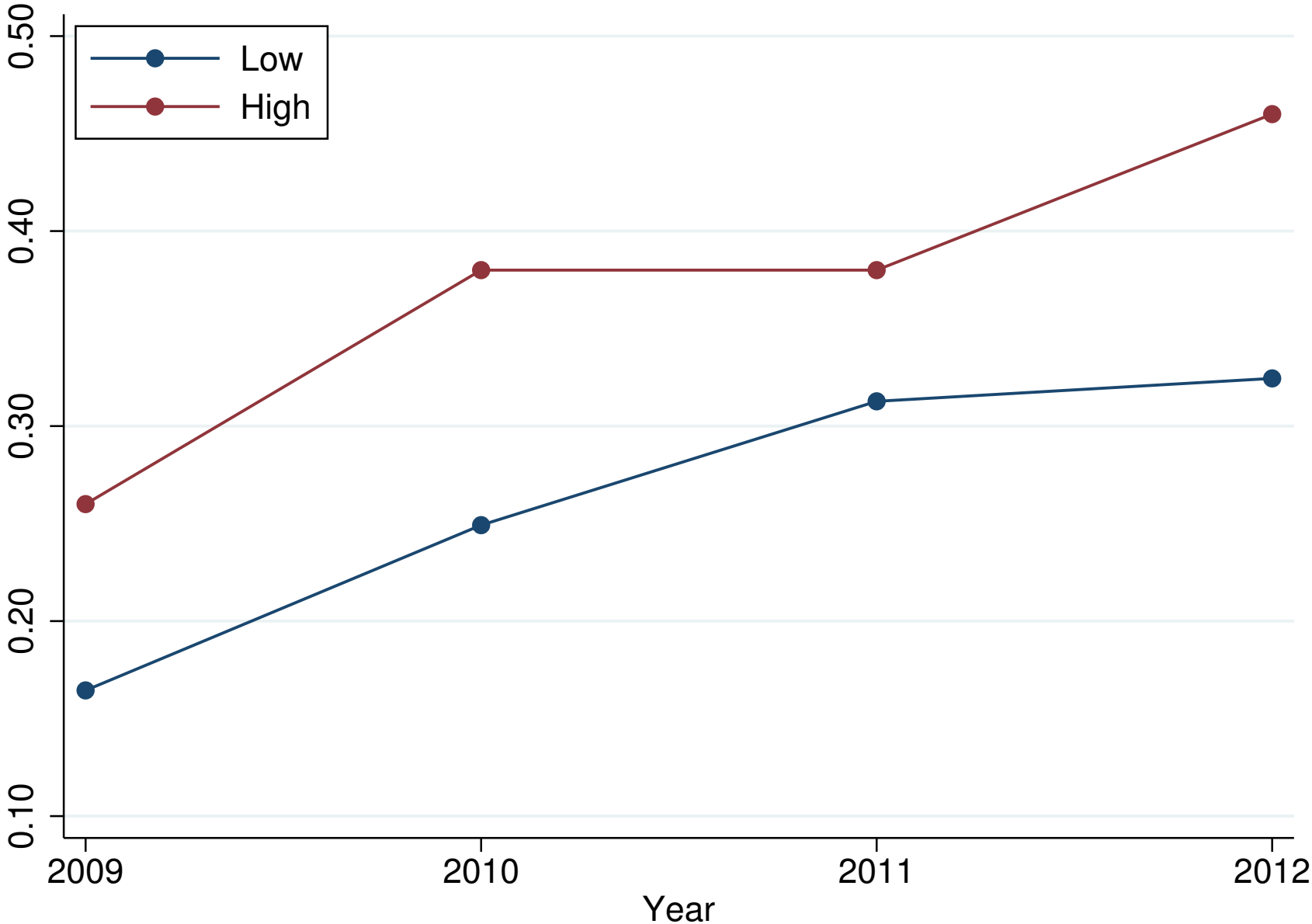


Financial Loss from Not Choosing the Super Simplified Regime (as a % of revenues)

Tax bracket/ Activity	I&C Retail ($\mu = 0.71$) ($\tau_f = 13\%$)	I&C Services ($\mu = 0.5$) ($\tau_f = 23\%$)	Non Commercial ($\mu = 0.34$) ($\tau_f = 20.5\%$)
Tax bracket 1	2%	3%	3%
Tax bracket 2	3%	4%	4%
Tax bracket 3	4%	6%	7%
Tax bracket 4	6%	10%	12%
Tax bracket 5	9%	16%	19%

Bunching

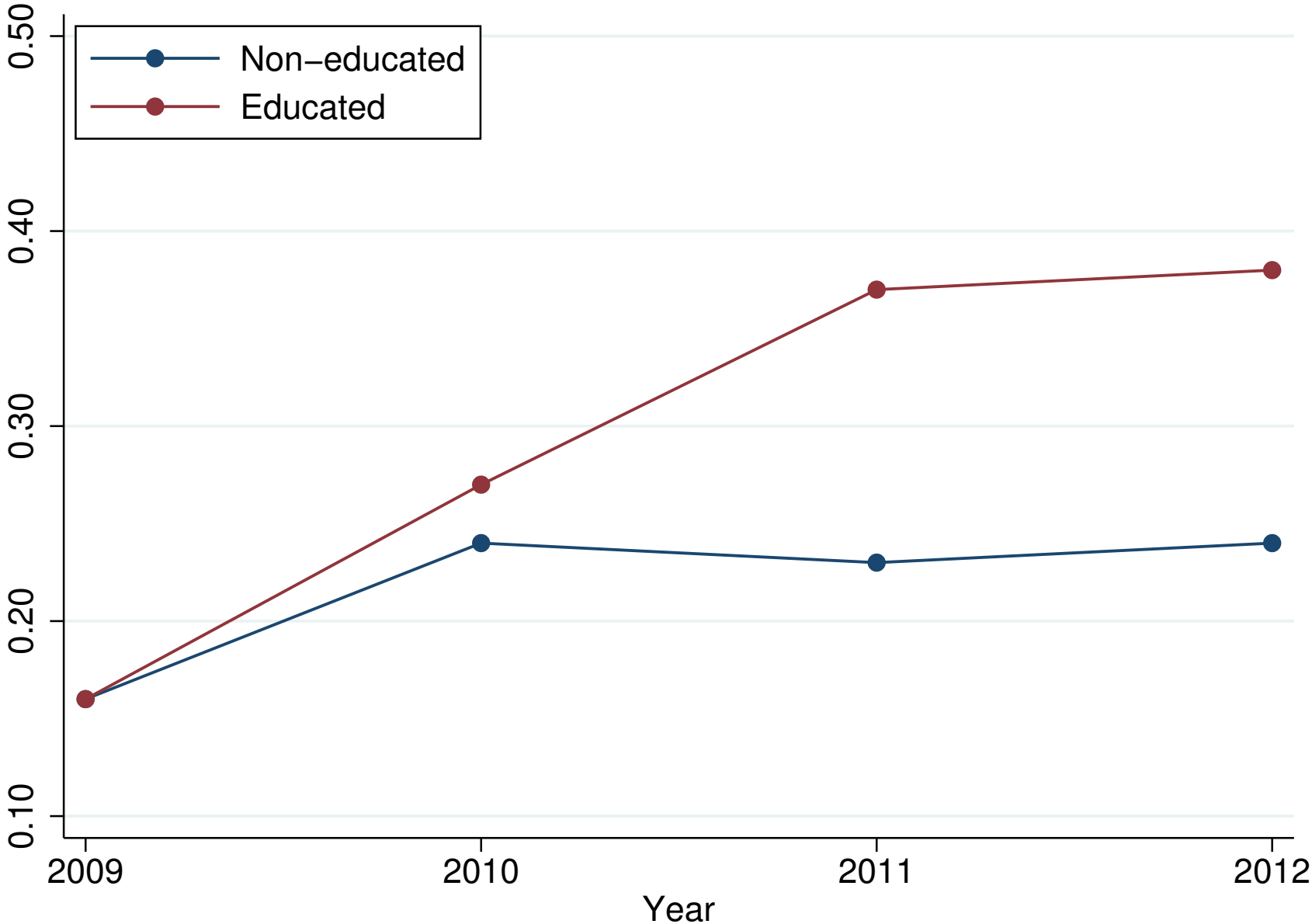
Share of Agents Making the Correct Regime Choice, by Tax Bracket



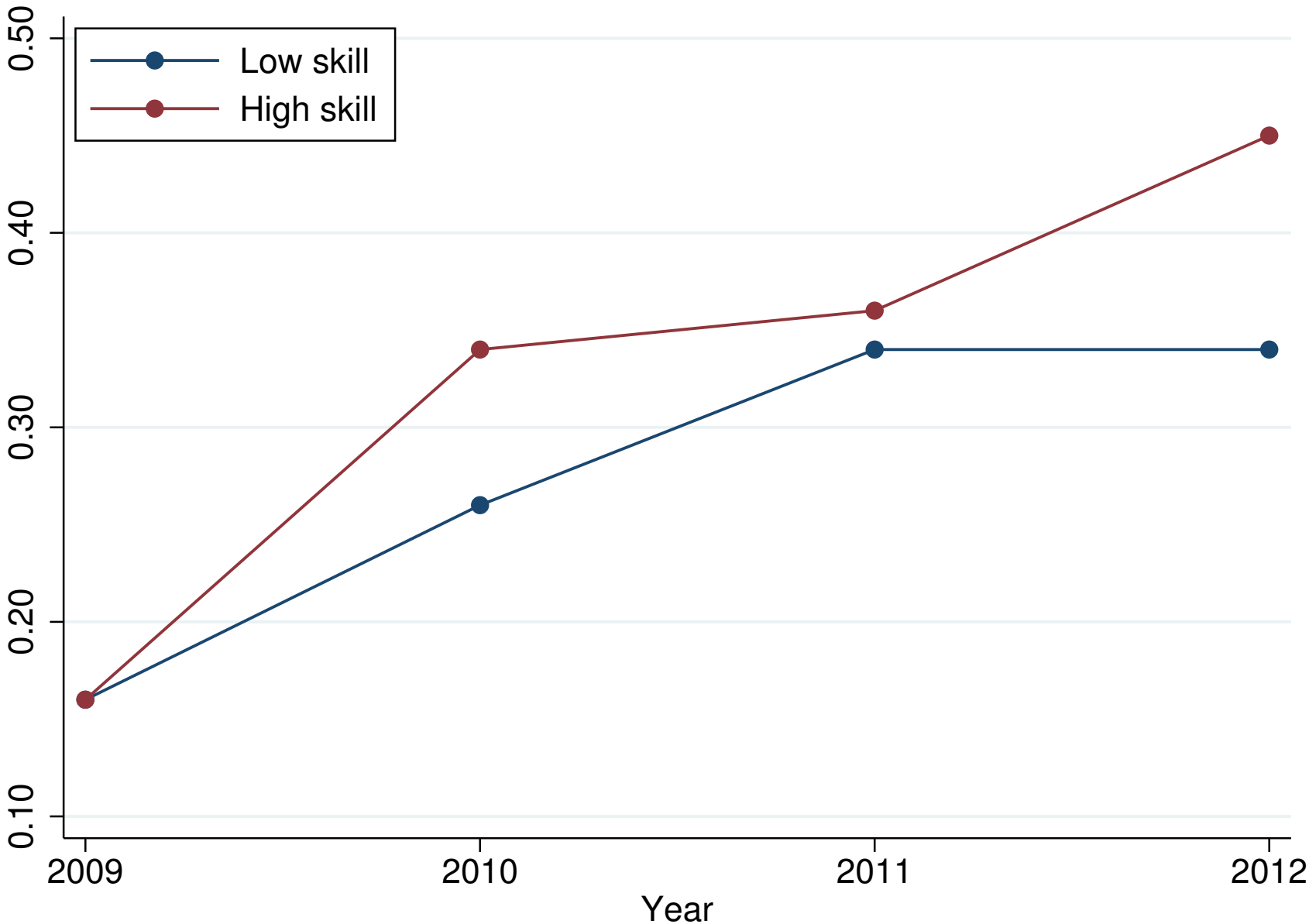
Which Agents Choose the Correct Regime? Fraction of Eligible Individuals Choosing the Super Simplified over the Simplified

Non-educated	22.1%	Educated	31.5%
Low skill	28.7%	High skill	34.3%
Low standard of living	29.0 %	High standard of living	39.4%
Old	27.2%	Young	37.3%
Does not claim social insurance benefits	25.7%	Claims social insurance benefits	33.8%
Does not claim UI benefits	29.3 %	Claims UI benefits	37.0%

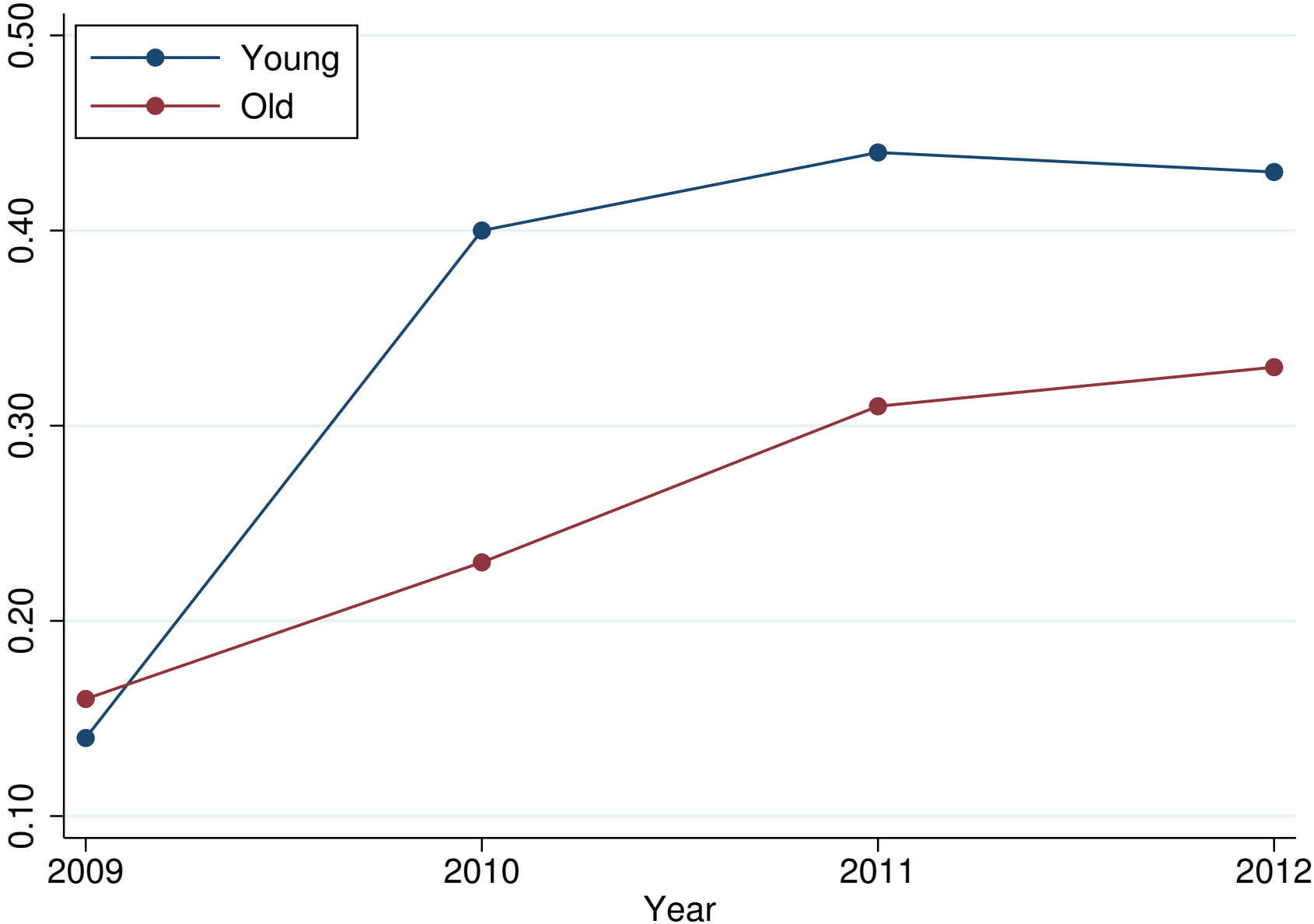
Share of Agents Making the Correct Regime Choice, by Education Level



Share of Agents Making the Correct Regime Choice, by Skill Level

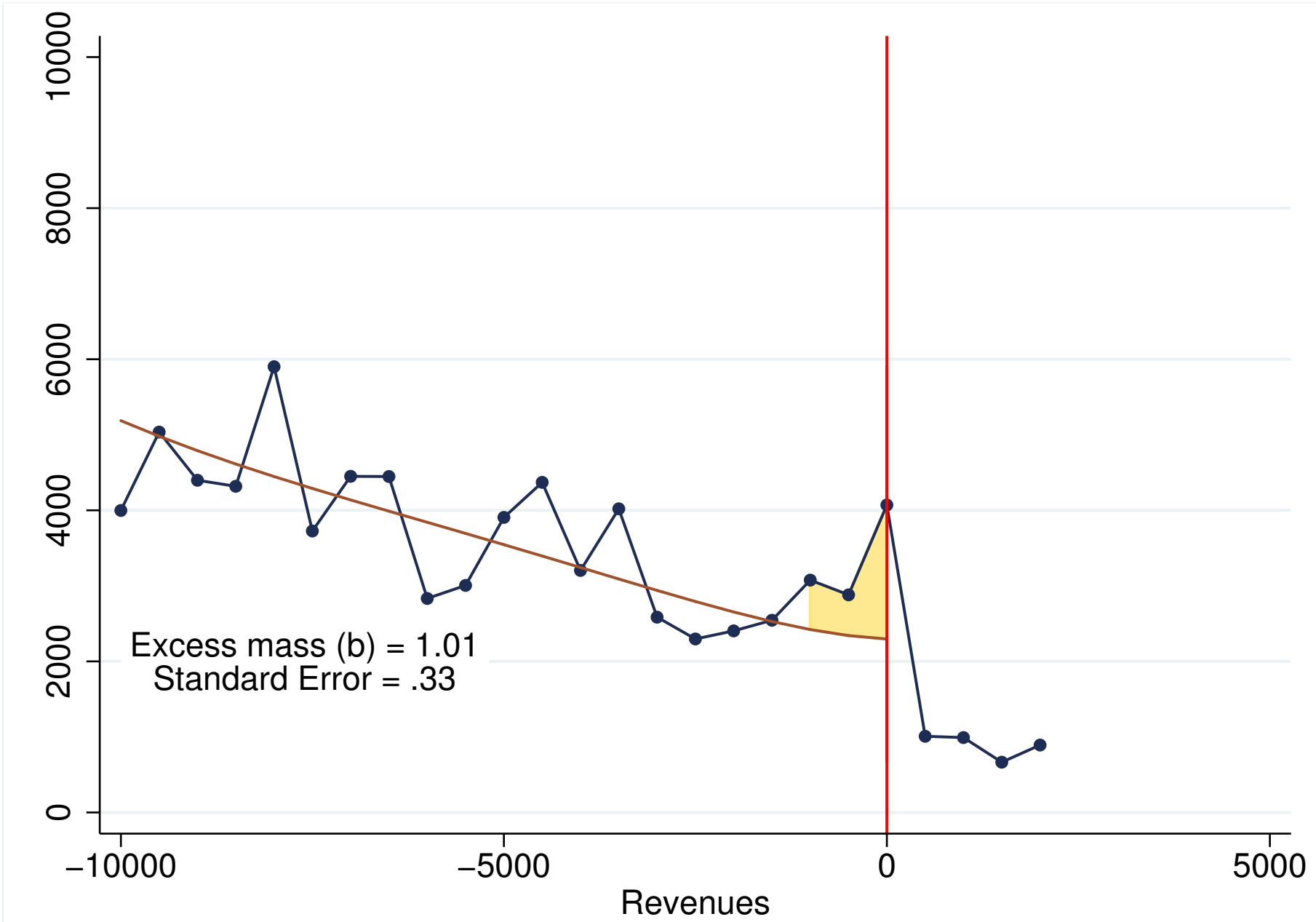


Share of Agents Making the Correct Regime Choice, by Age



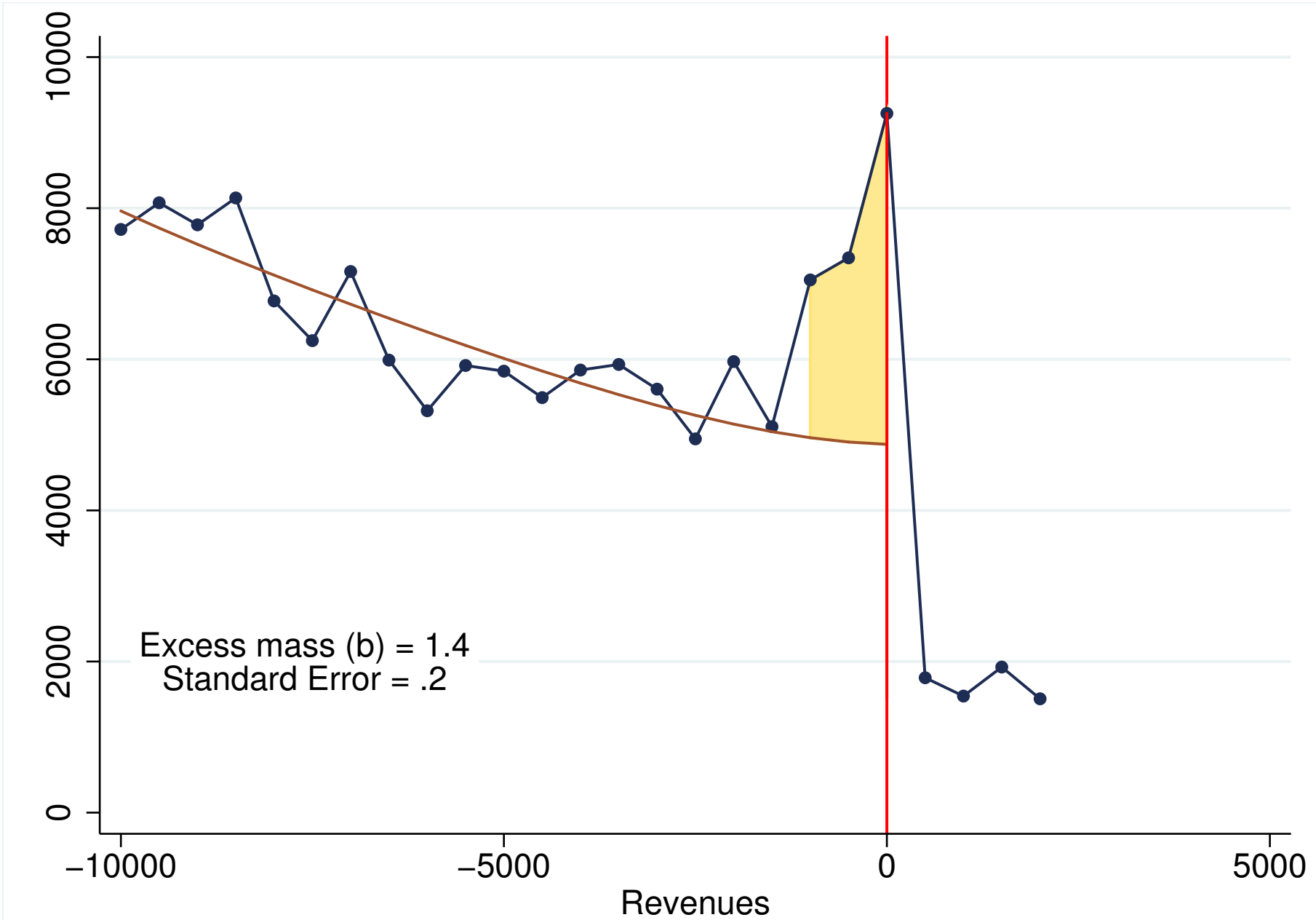
Increasing Bunching Over Time 1999-2001

$\varepsilon_{\text{Services}} = 0.14(0.619)$, $\varepsilon_{\text{NC}} = 0.14(0.154)$



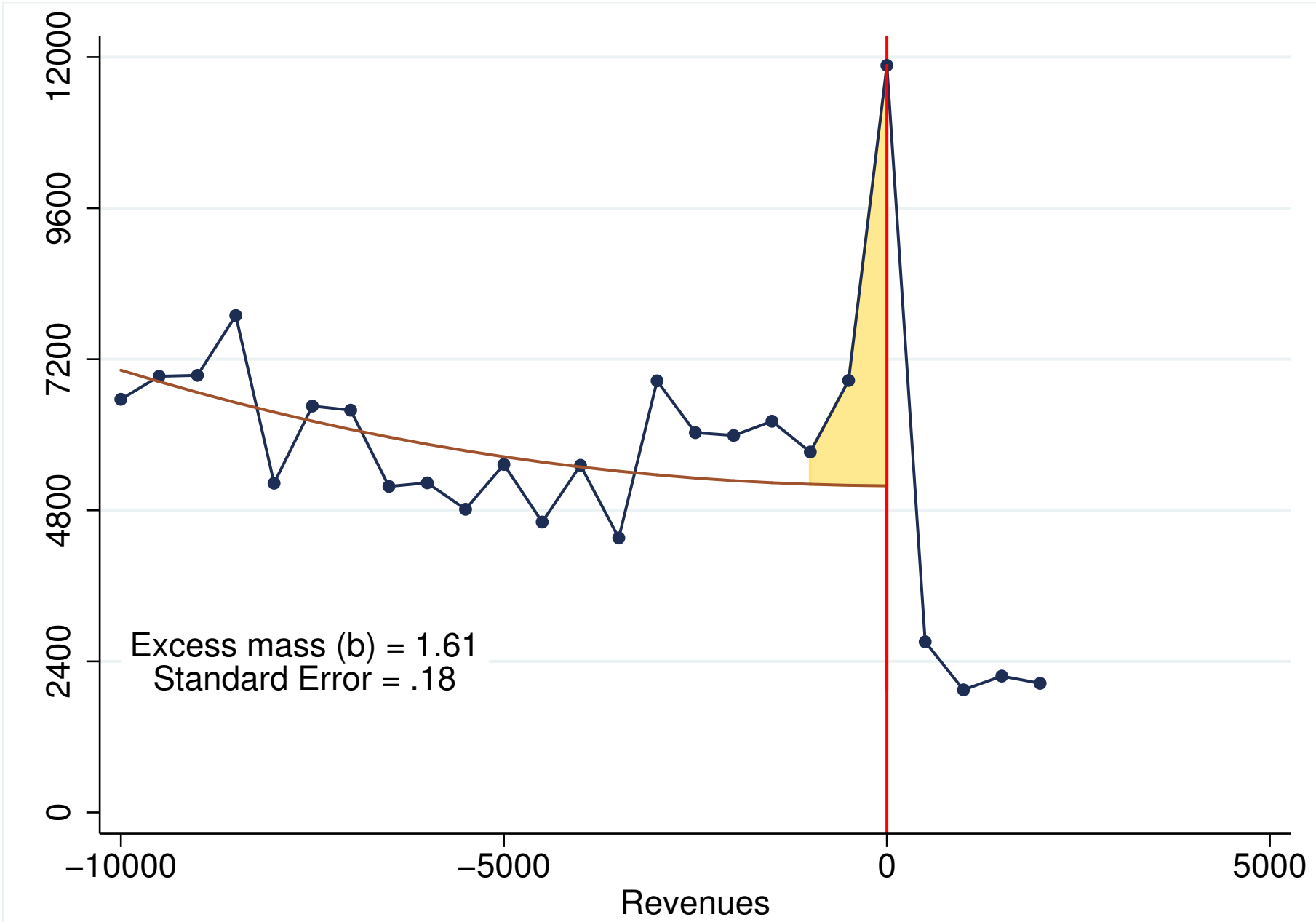
Increasing Bunching Over Time 2002-2005

$\varepsilon_{\text{Services}} = 0.17(0.085)$, $\varepsilon_{\text{NC}} = 0.20(0.064)$



Increasing Bunching Over Time 2006-2008

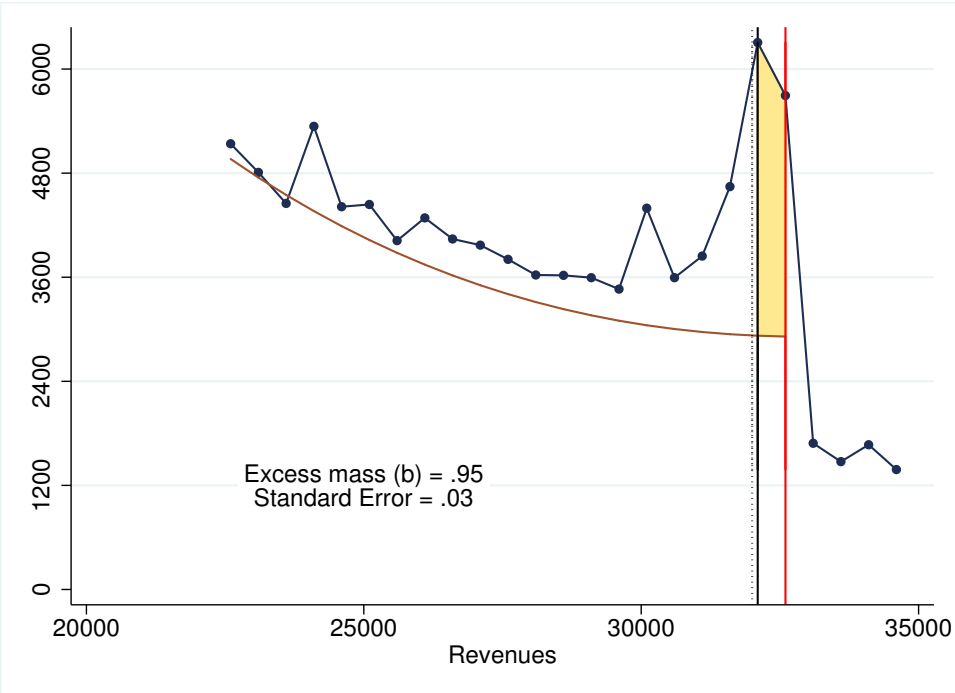
$\varepsilon_{\text{Services}} = 0.36(0.172)$, $\varepsilon_{\text{NC}} = 0.40(0.126)$



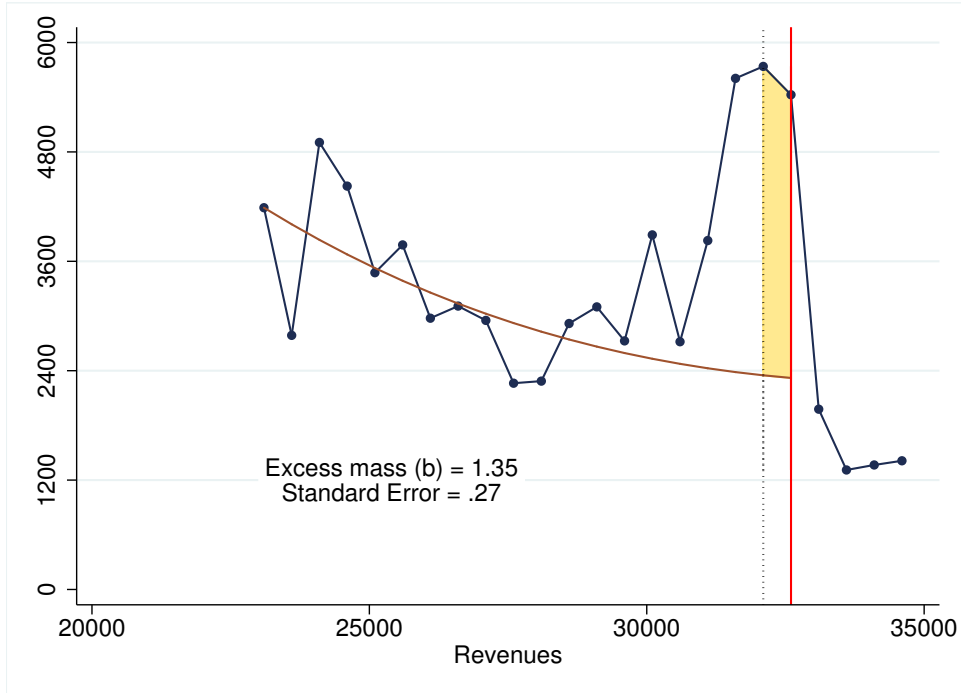
Elasticity Estimates over Time

Activity Type	Cost (% of revenues)	Period	Earnings Response Δy^*	ATR Jump Δt^*	Reduced-Form Elasticity e_R
I&C Services	0.52	1999-2001	1020	0.37	0.14 (0.619)
	0.56	2002-2005	980	0.29	0.17** (0.085)
	0.52	2006-2008	1470	0.35	0.36** (0.172)
Non Commercial	0.15	1999-2001	1220	0.65	0.14 (0.154)
	0.22	2002-2005	1420	0.67	0.20*** (0.064)
	0.12	2006-2008	1690	0.59	0.40*** (0.126)

Slow Learning: Bunching at the "Old" Threshold



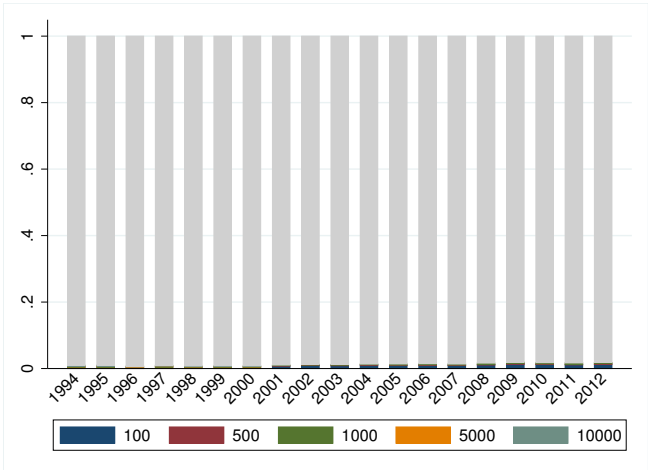
(a) 2011



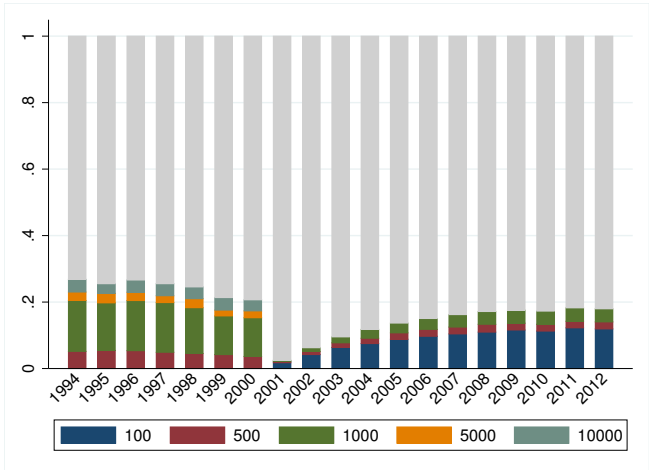
(b) 2012

Outline

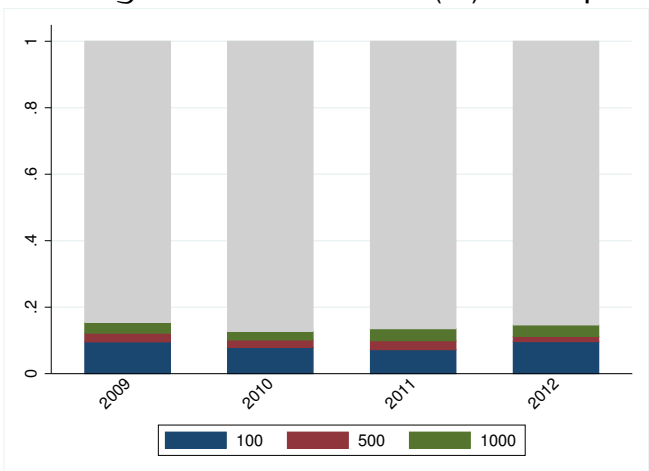
Bunching at Round Numbers in Different Regimes



(a) Standard Regime

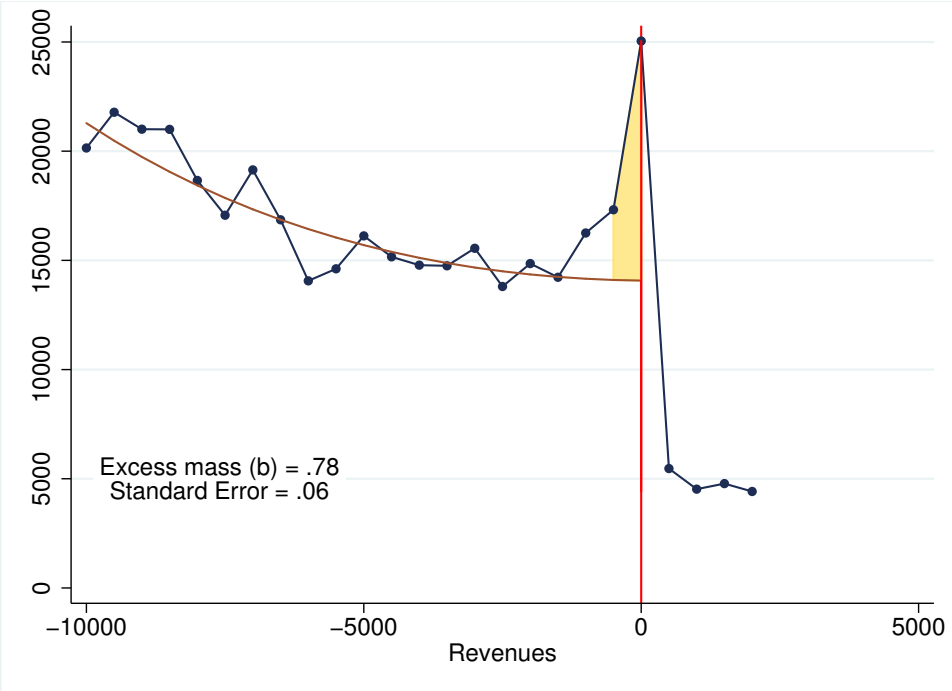


(b) Simplified Regime



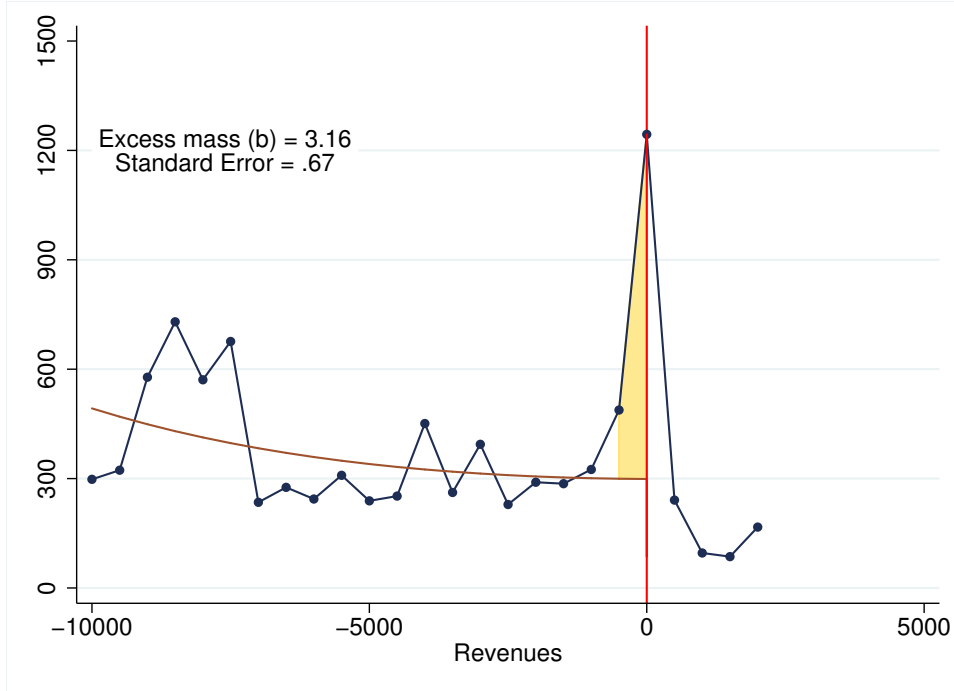
(c) Super Simplified Regime

Income Shifting Within the Household: More Bunching in Two-Earners Households



(a) Households with one self-employed agent

b = 0.78 (0.06)

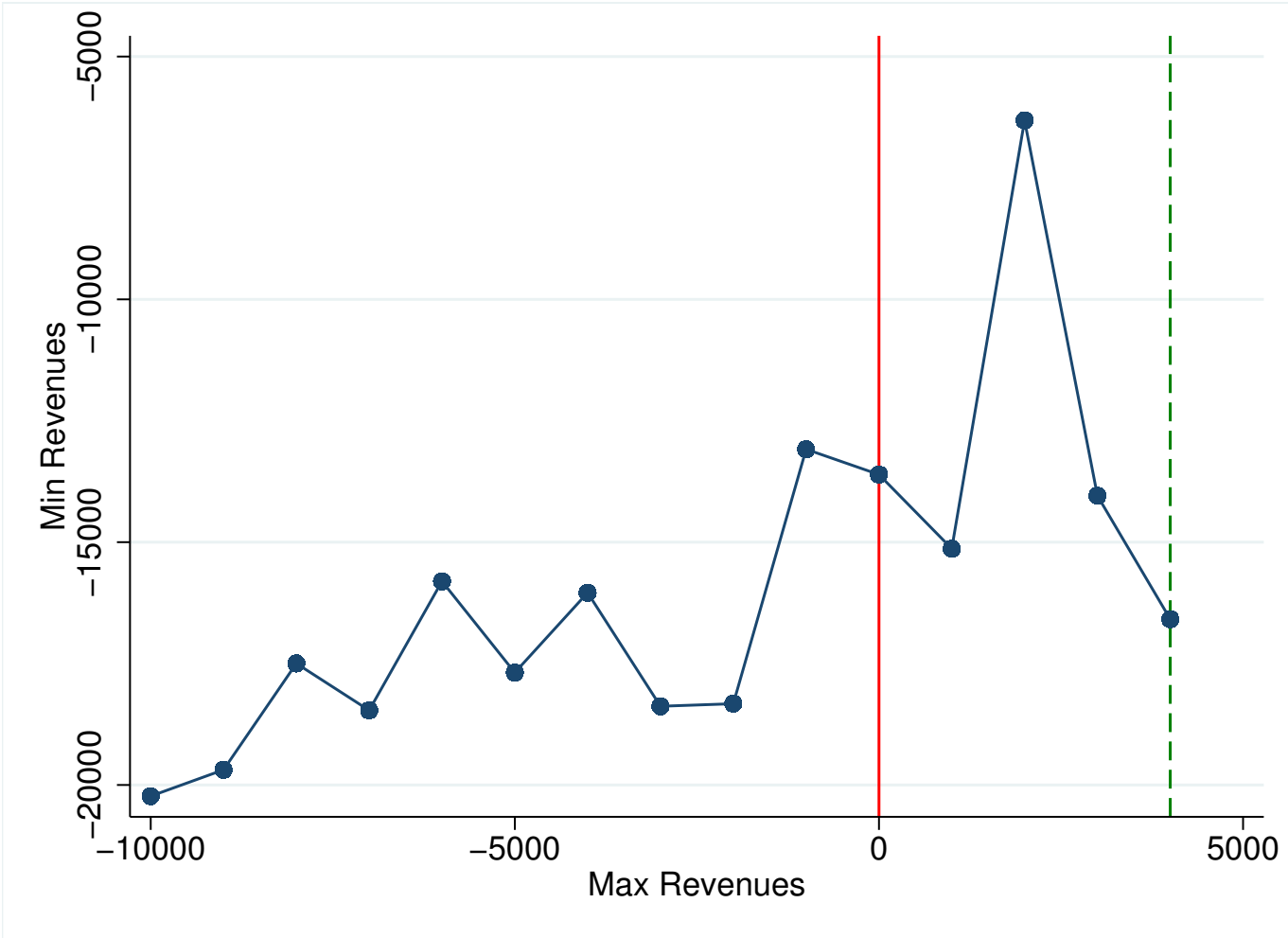


(b) Households with two self-employed agents

b = 3.16 (0.67)

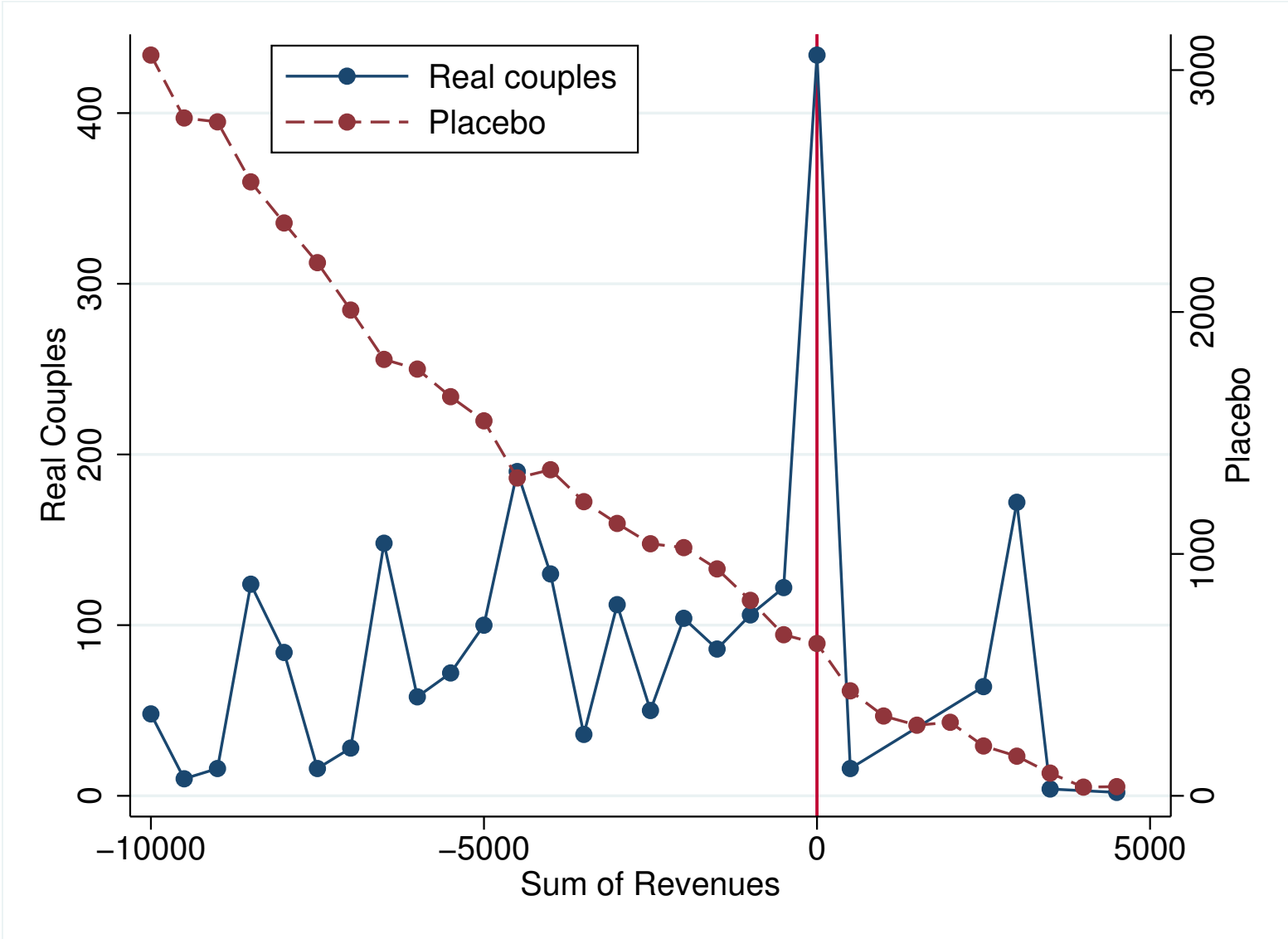
⇒ Could be selection (individuals who like to evade taxes live together), or simply more information in two earner households.

Income Shifting Within the Household: Lower earner's revenues

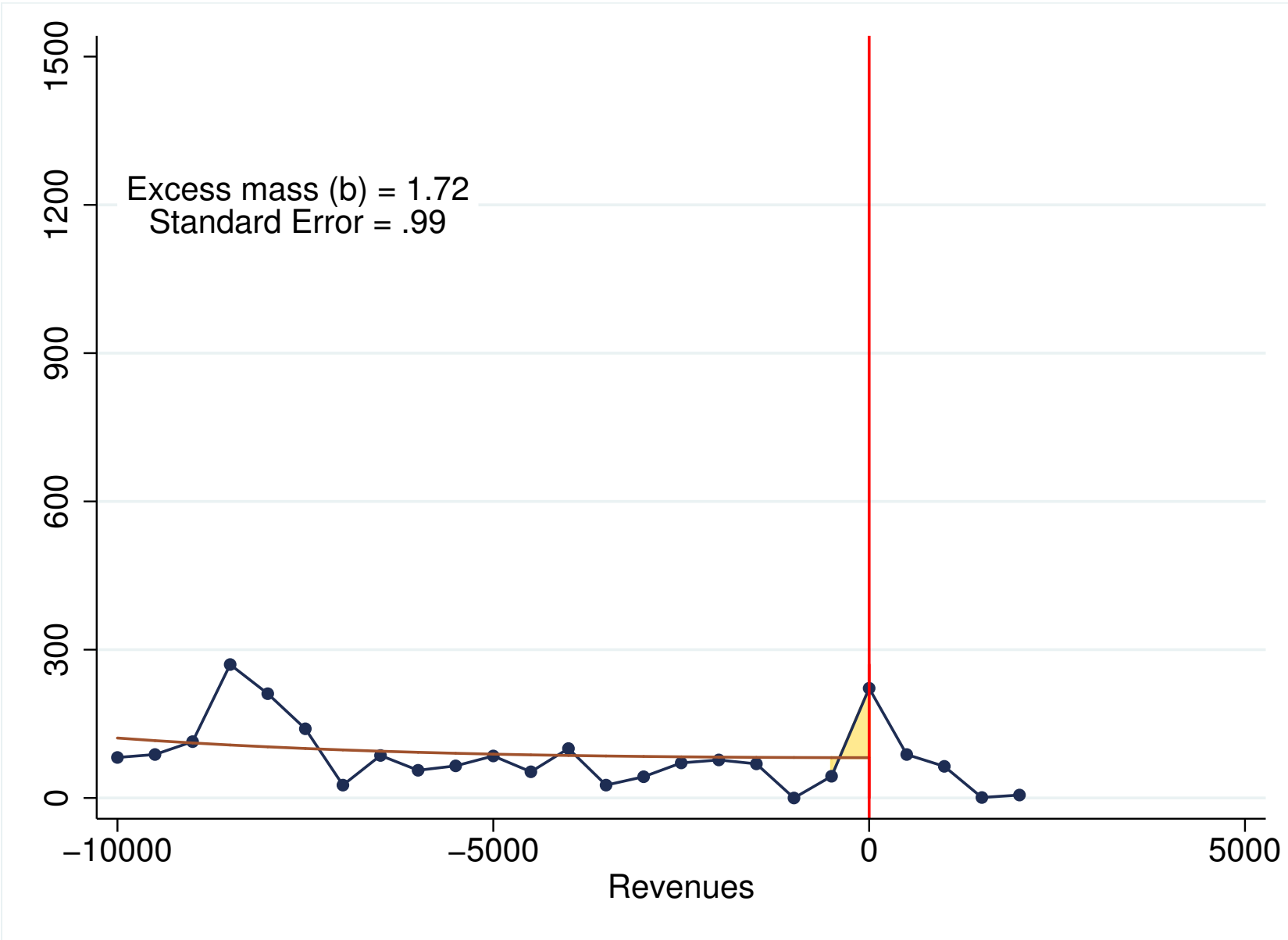


Two bigger jumps: i) right before threshold, ii) in the tolerance region.

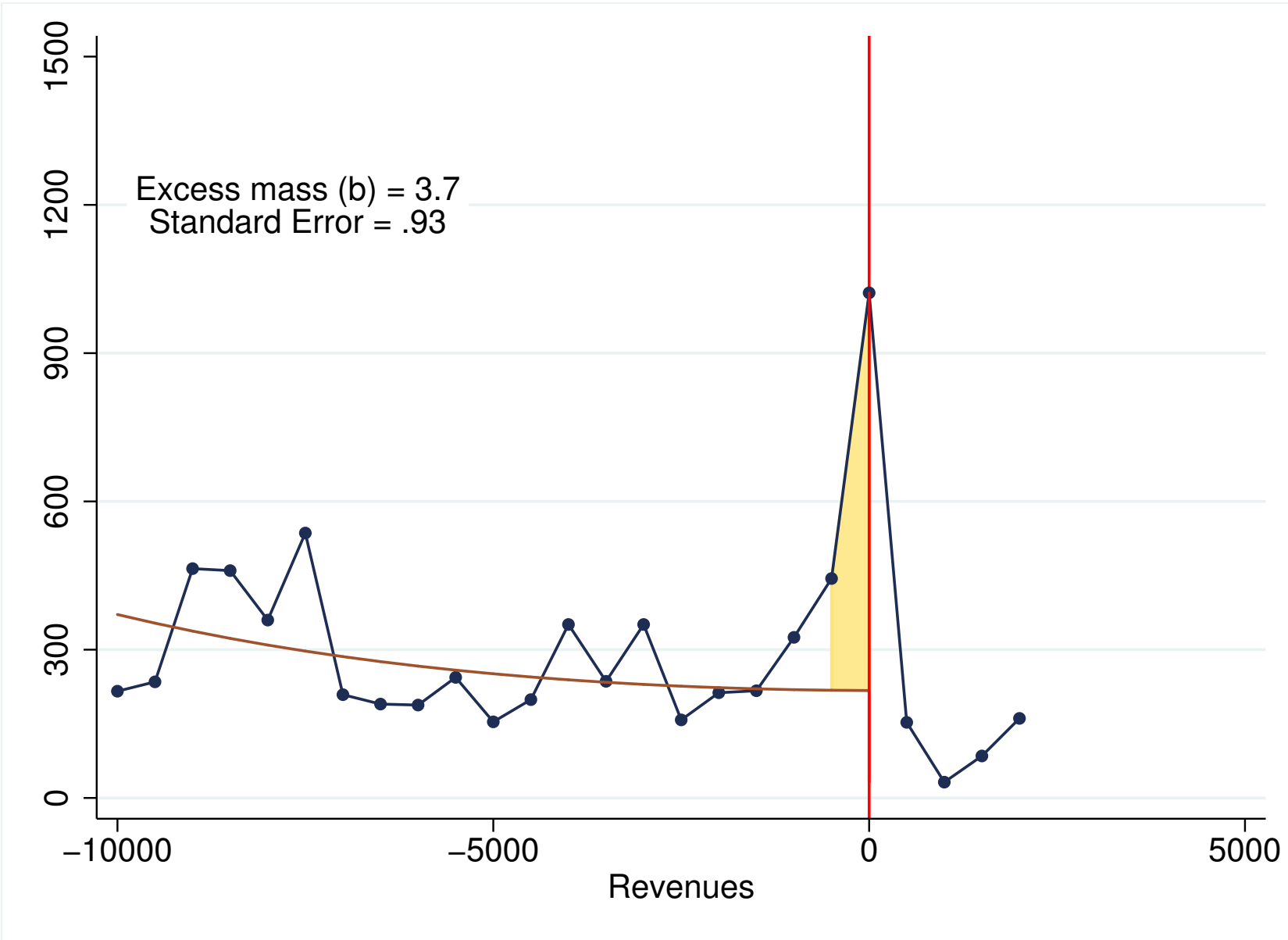
Income Shifting Within the Household: Bunching at Twice the Threshold



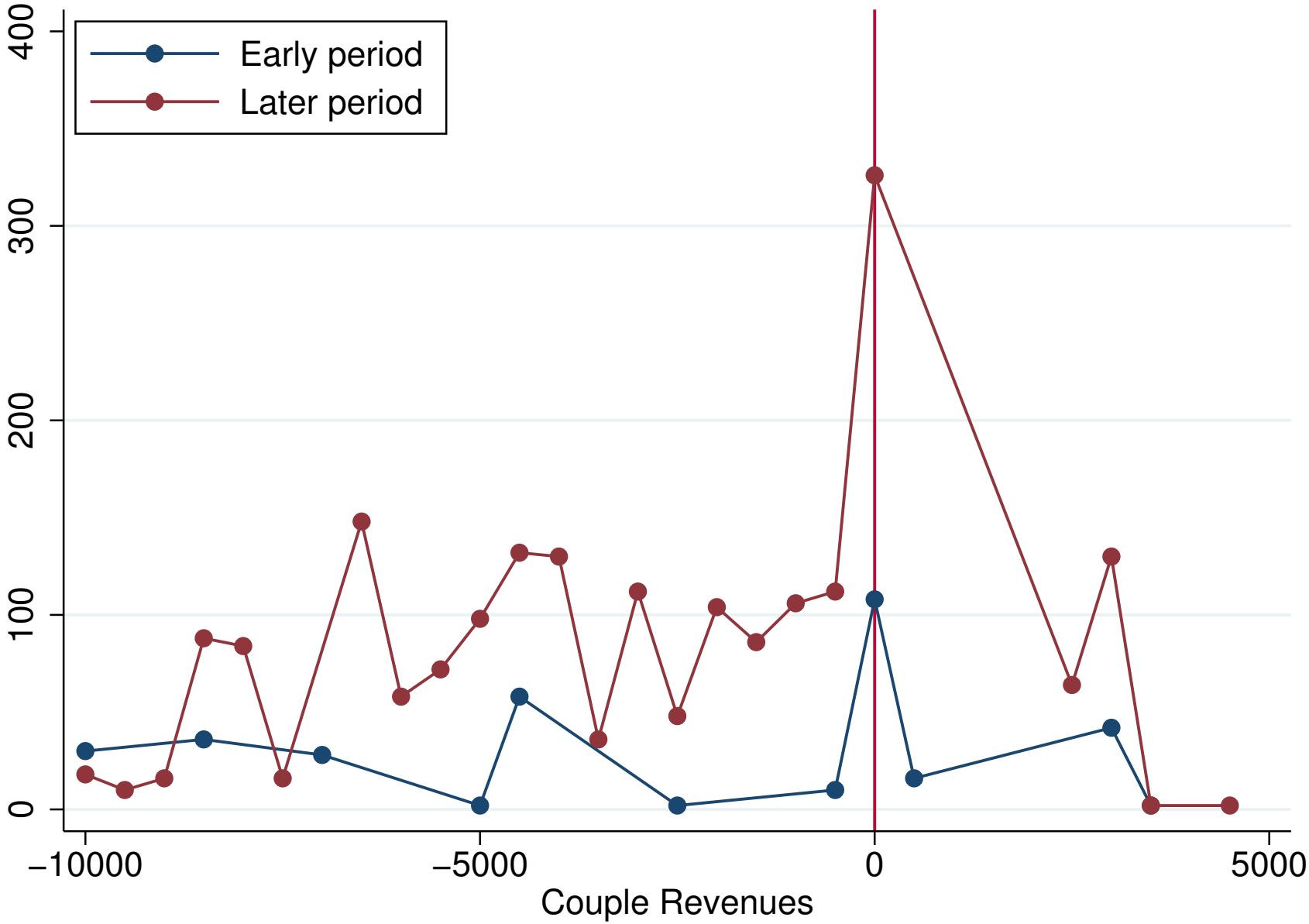
Learning to "Shift Income" Within the Household
Early Period 1999-2001



Learning to "Shift Income" Within the Household
Later Period 2002-2008



Learning to "Shift Income" Within the Household
Sum of Revenues at Twice the Threshold



Conclusion

Study effects of tax incentives and tax simplicity on self-employed.

New French tax returns 1994-2012, combined with survey data.

Large value for tax simplicity (160 to 650 euros).

Tax complexity is costly:

> Agents learn slowly over time about policies and make dominated regime choices.

Tax complexity can be regressive:

> Low education, low skill, low income agents make wrong choices and learn slower.

APPENDIX

Self-Employed Earners by Regime

	1994-2008		2009-2012		
	Standard	Simplified	Standard	Simplified	Super Simplified
Age	46	52	48	50	43
Female	0.30	0.34	0.34	0.38	0.37
Married or in Civil Union	0.68	0.58	0.61	0.52	0.44
Has any children	0.47	0.29	0.43	0.30	0.36
Number of Children	0.84	0.50	0.76	0.52	0.62
Retired	0.07	0.31	0.10	0.28	0.13
Claimed unemployment benefits	0.02	0.07	0.03	0.10	0.21
Claimed any social insurance benefits	0.40	0.33	0.41	0.38	0.54
Educated	0.77	0.68	0.83	0.76	0.81
High skill	0.22	0.15	0.26	0.19	0.15
Population (in mill.)	19.3	7.3	4.6	3.1	0.9

Back

Self-Employed Earners by Regime

	1994-2008		2009-2012		
	Standard	Simplified	Standard	Simplified	Super Simplified
Wage Income	3945	10439	4470	10868	7985
Self-employed Income	39446	11522	40925	11848	10307
Capital Income	5938	6174	7864	6713	2484
Tax free capital income	2294	2452	2464	2611	1032
Standard of living	56814	42434	66278	47553	39086
Zero tax bracket	0.09	0.19	0.08	0.18	0.23
Low tax bracket	0.20	0.28	0.16	0.24	0.27
Medium tax bracket	0.29	0.32	0.37	0.40	0.42
High tax bracket	0.42	0.22	0.39	0.18	0.08
Population (in mill.)	19.3	7.3	4.6	3.1	0.9

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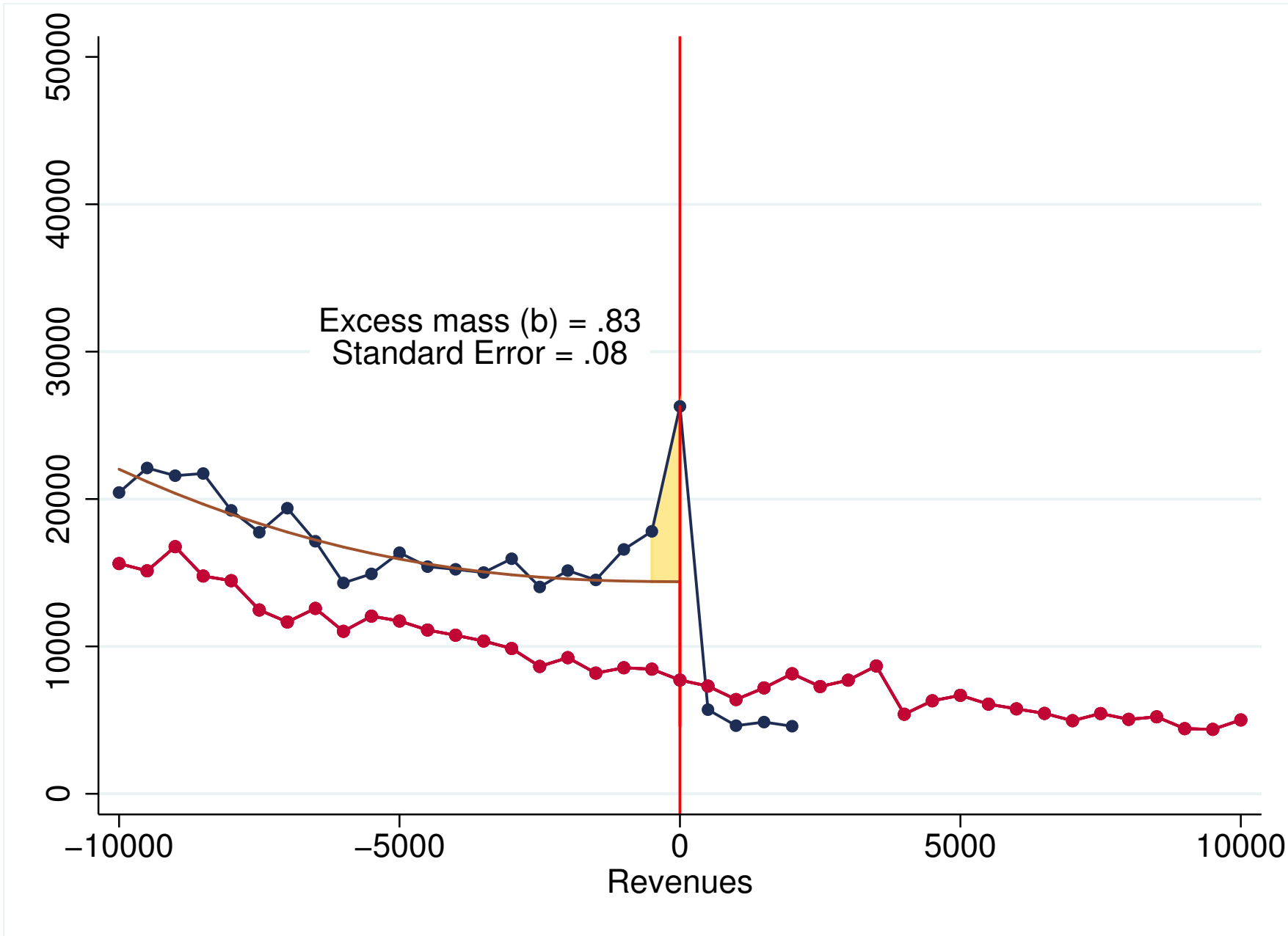
Bunching in the Simplified Regime, 1999-2008



Modeling the Tax Discontinuities

Standard regime:	$\tau_r = \tau^y + \tau_r^{ss}(1-\tau^y)$	is levied on net income	$z_r = (1-c_r)y_r$
Simplified regime:	$\tau_m = \tau^y + \tau_m^{ss}$	is levied on taxable income	$z_m = (1-\mu)y_m$
Super simplified regime:	τ_f	is levied on gross revenues	$z_f = y_f$

Standard regime: $t_r = c_r + (\tau^y + \tau_r^{ss}(1-\tau^y))(1-c_r)$

Simplified regime: $t_m = c_m + (\tau^y + \tau_m^{ss})(1-\mu)$

Super simplified regime: $t_f = c_f + \tau_f$

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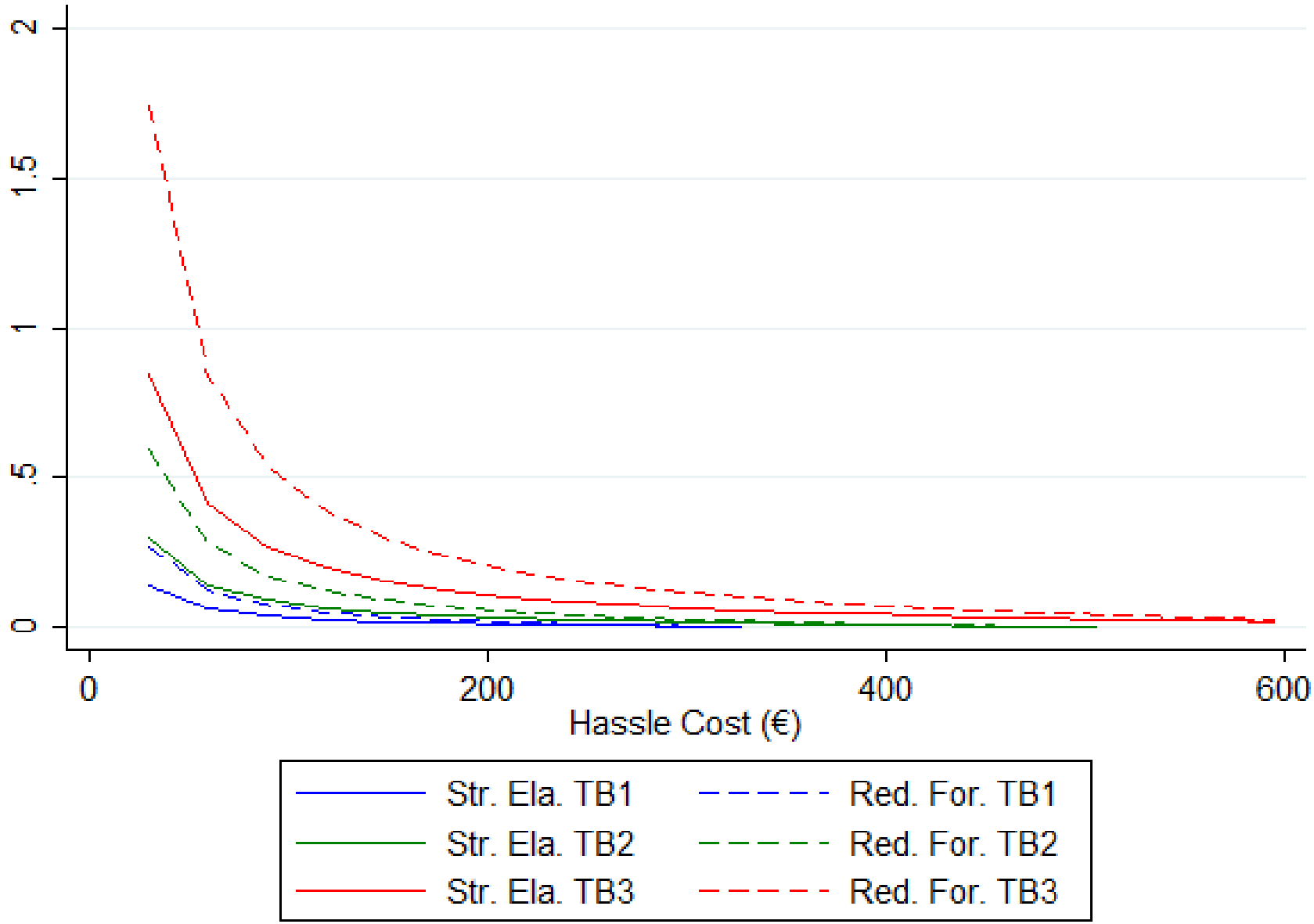
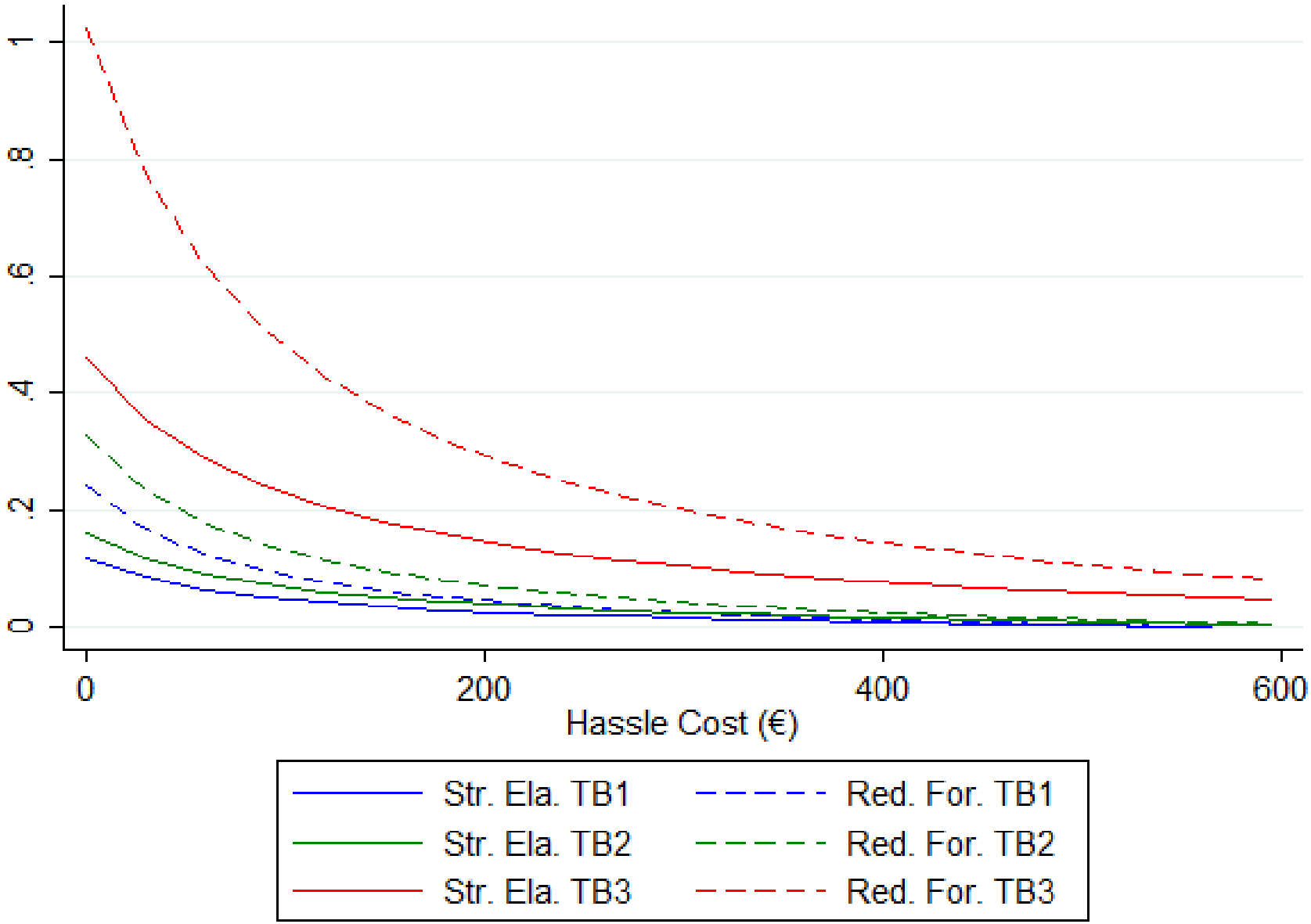
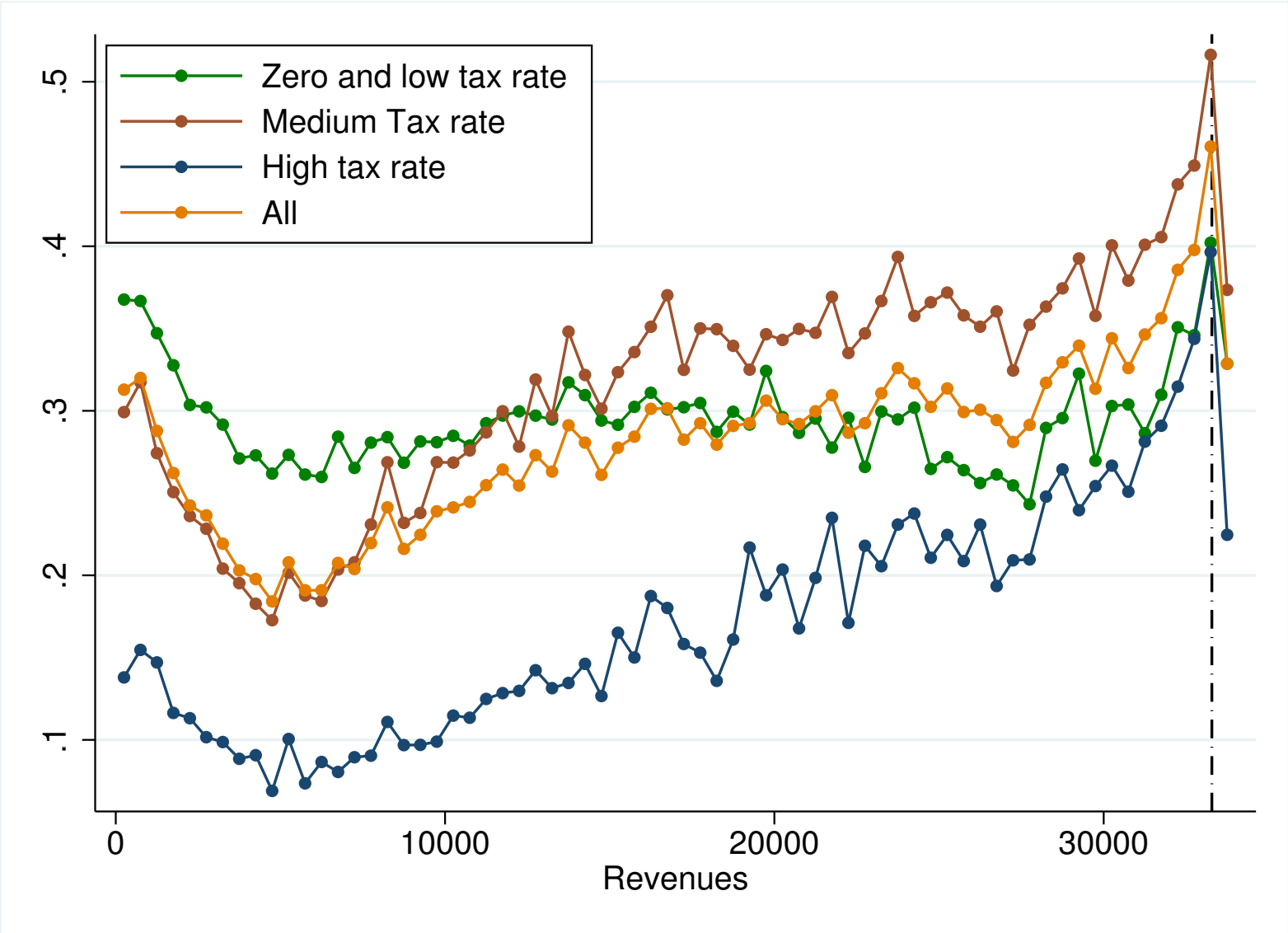
Sensitivity of Elasticity Estimates to Hassle Costs *a*, I&C Services



Sensitivity of Elasticity Estimates to Hassle Costs *a*, Non Commercial



Regime Choice – Share Choosing the Super Simplified Conditional on Choosing a Simpler Regime



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