

How Taxing Is Tax Filing? Leaving Money on the Table Because of Hassle Costs

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Motivation

Large Public Finance literature estimates efficiency cost of taxation but very little looks at burden of tax filing even though both impose burden of similar magnitude

Every year 140 million individual tax returns are filed
⇒ 750,000 full time employees

Are taxpayers **forgoing large tax benefits** because of time required to file taxes?

What does it imply about **tax filing costs** overall?

Decision to Itemize

Taxpayers are allowed to deduct some expenses from taxable income by picking the largest of:

- 1** The **standard deduction**: fixed amount for all taxpayers irrespective of income, varies with marital status. **Does not require extra paperwork**
- 2** **Itemized deductions**: list all expenses on **schedule A** and keep track of **receipts**

Are taxpayers forgoing large amounts of deductions by picking the standard deduction to avoid the cost of itemizing?

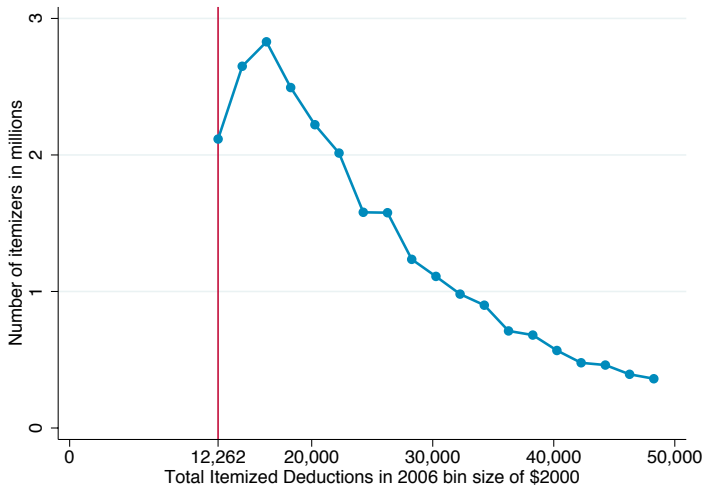
Identification Challenges

Easy question if know **counterfactual deductions** of taxpayers who claim standard deduction.

Problem: Taxpayers who itemize do not report true level of deductions \Rightarrow Tax data does not contain counterfactual deductions.

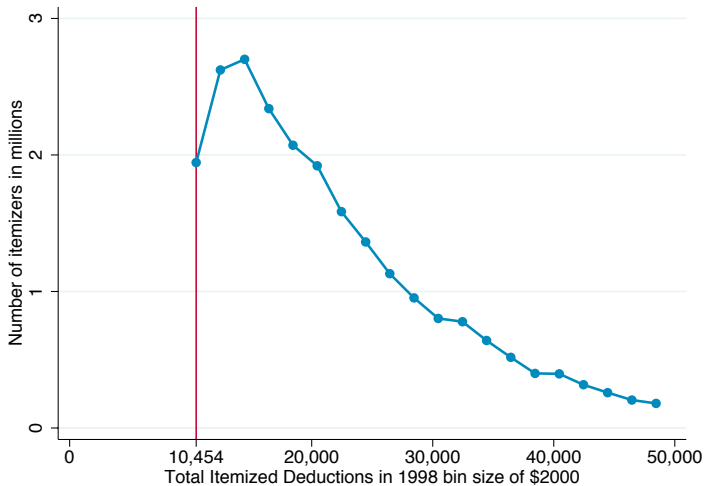
Solution: Use **novel identification strategy** that relies on shape of distribution in neighborhood of standard deduction to **reconstruct** counterfactual deductions.

Missing Mass (2006)



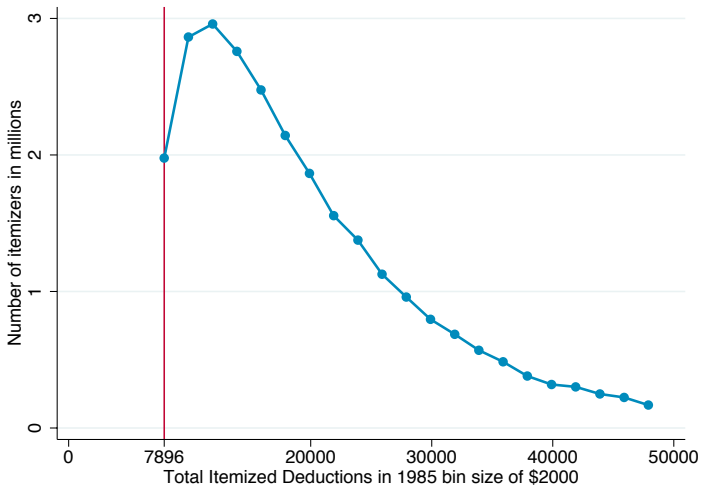
Note: Standard Deduction (red horizontal line) equal to \$12,172

Missing Mass (1998)



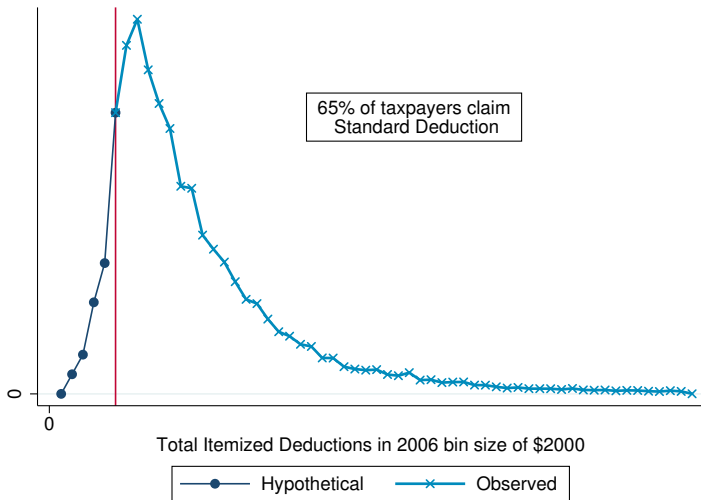
Note: Standard Deduction (red horizontal line) equal to \$10,378

Missing Mass (1985)

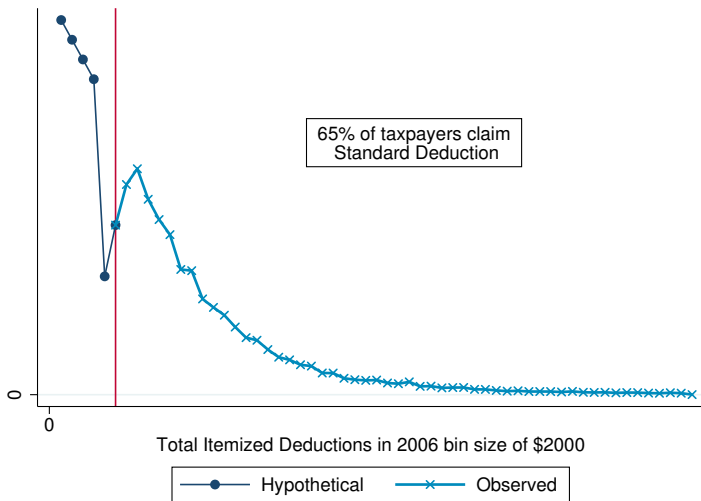


Note: Standard Deduction (red horizontal line) equal to \$7838

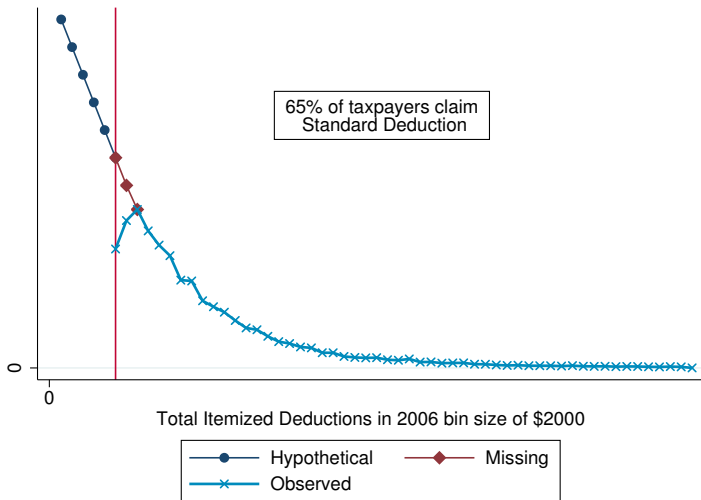
Increasing Density: Impossible



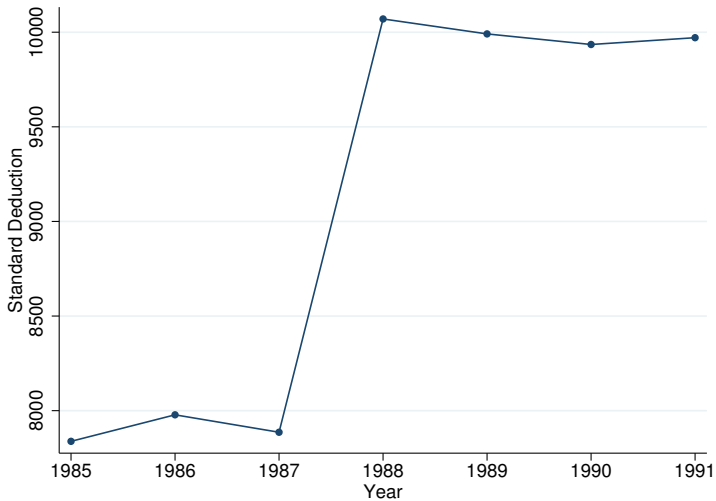
Double Peaked: Unlikely



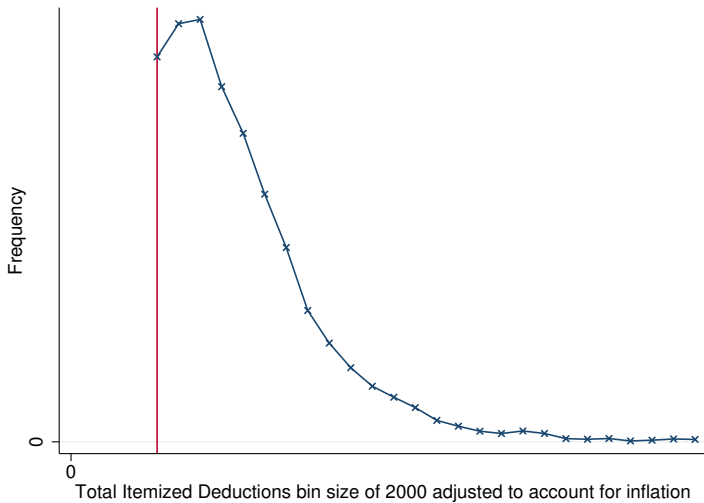
Discontinuity at Standard Deduction



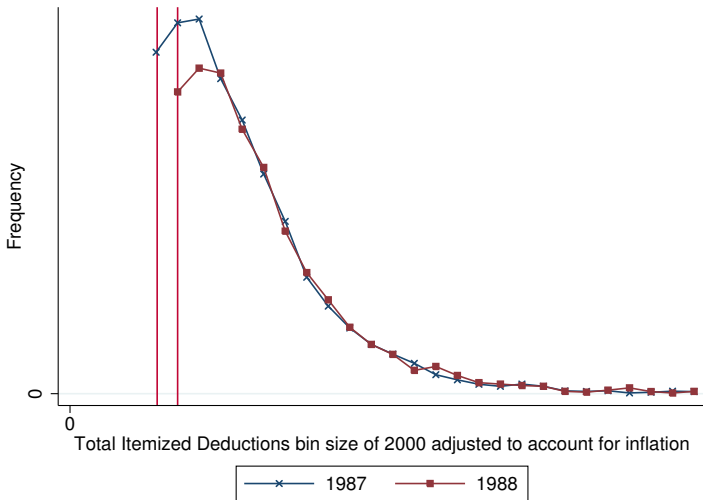
Reform Based Identification



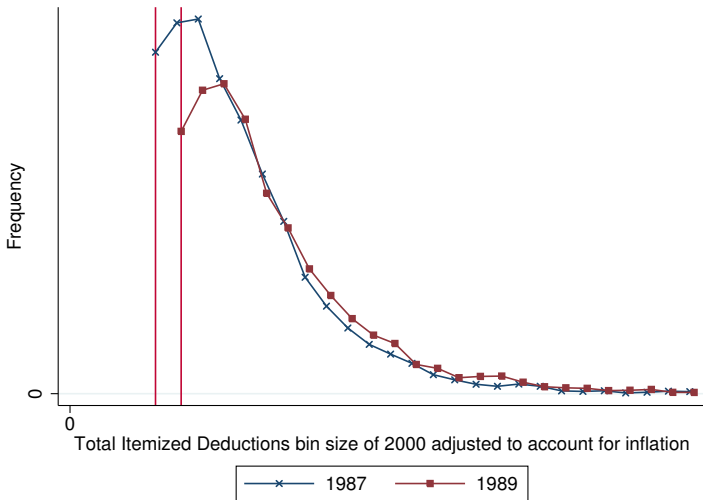
1987 (Pre-Reform)



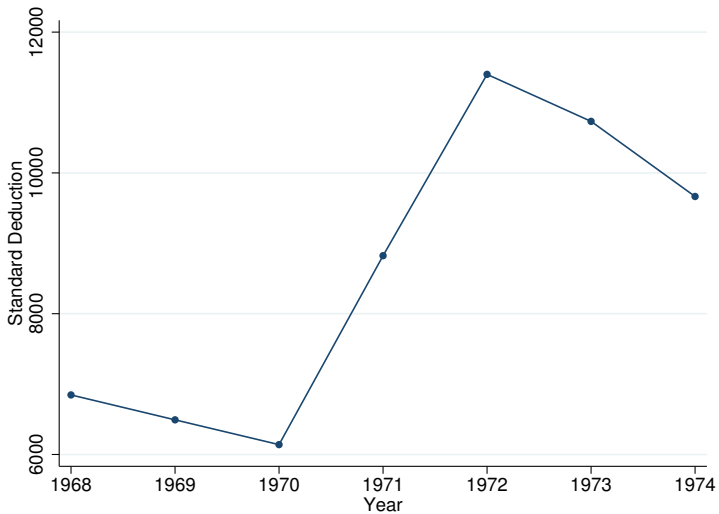
1987-1988: Partial Response



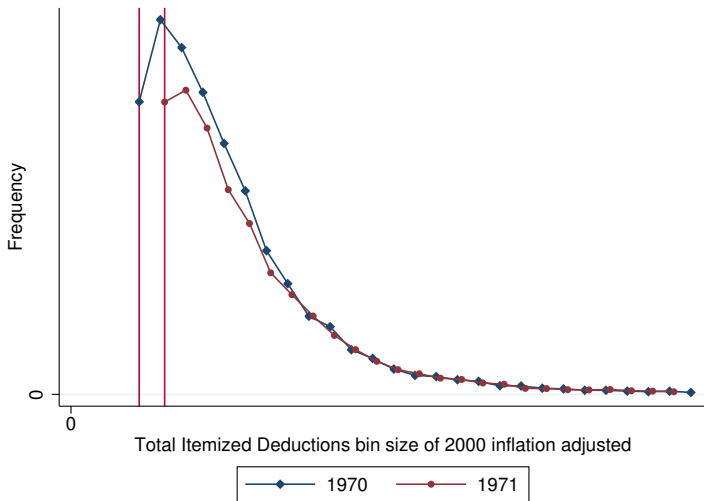
1987-1989: Full Response



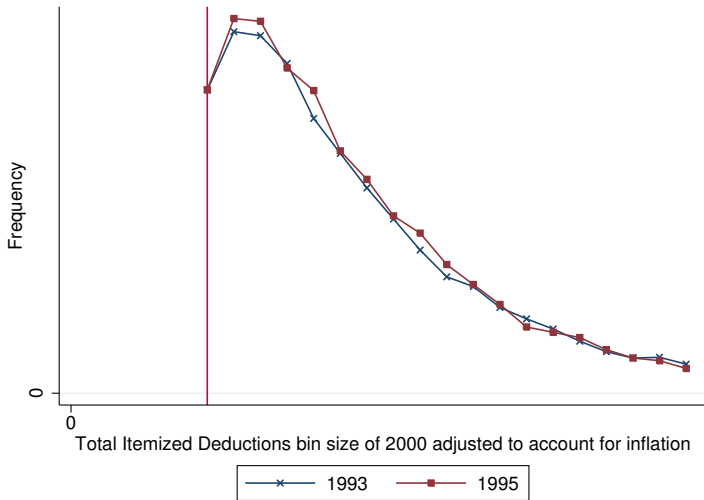
Another Reform: 1971



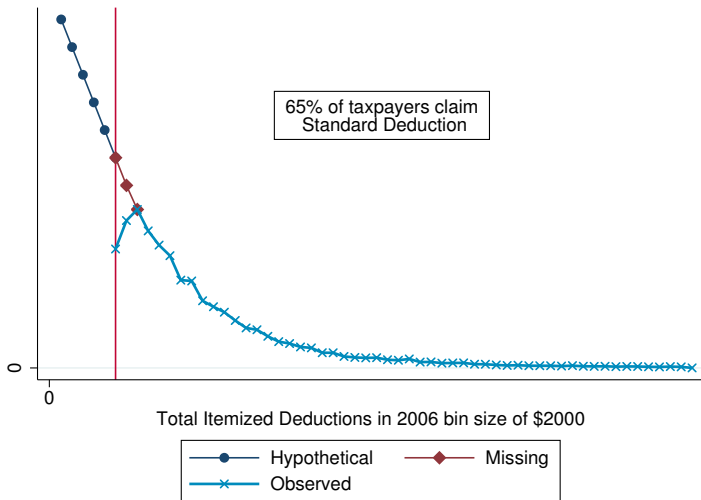
1970-1971



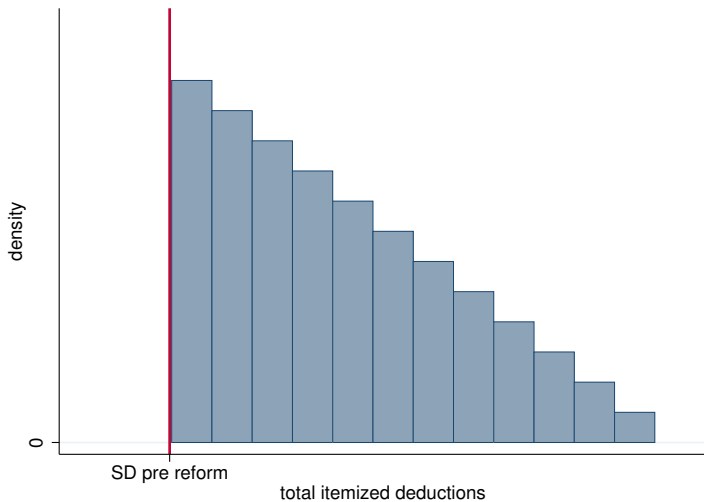
Placebo Tests



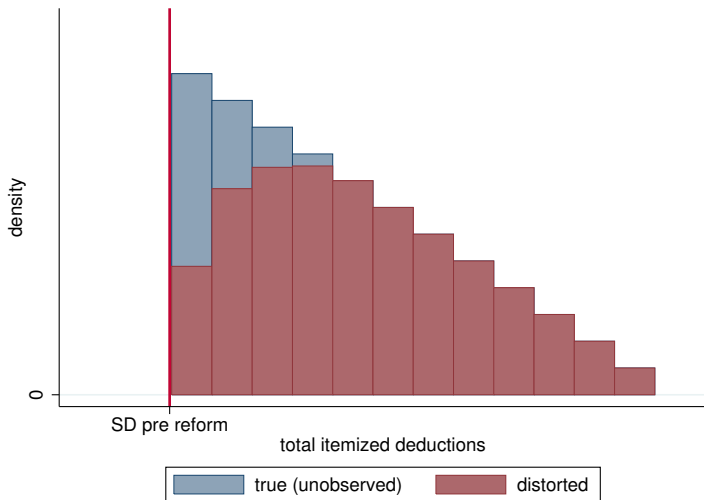
Discontinuity at Standard Deduction



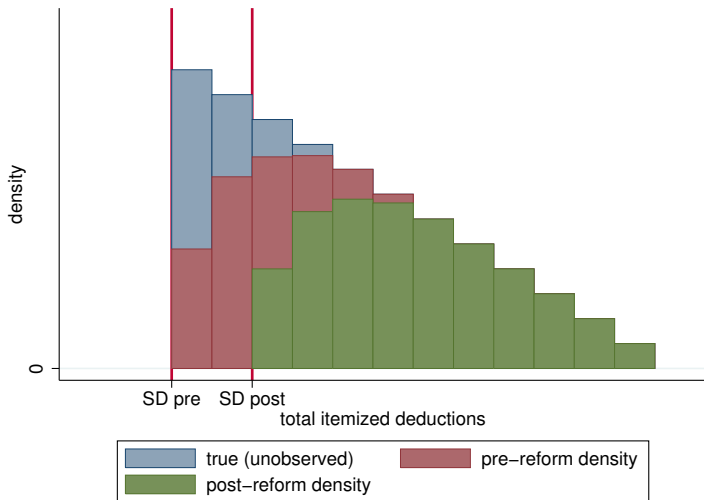
No Distortion With No Cost



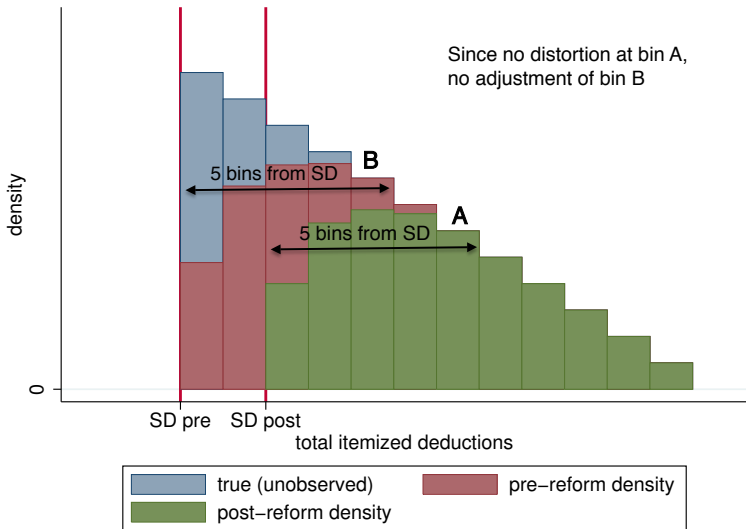
Distortion After Standard Deduction Introduced



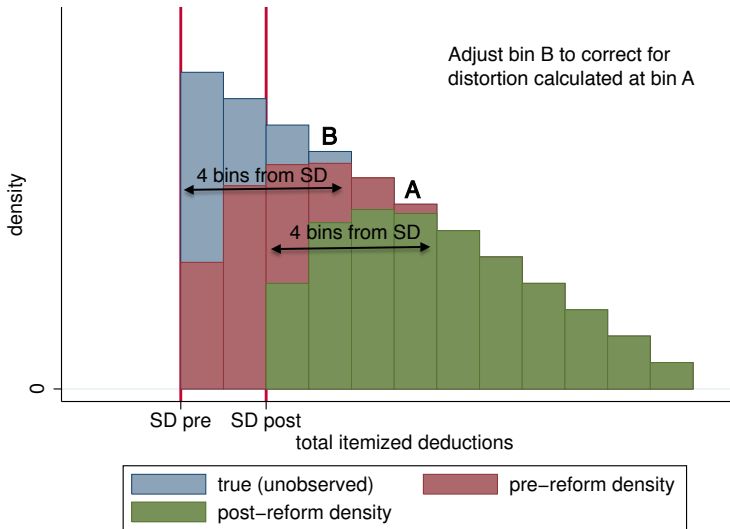
After Reform



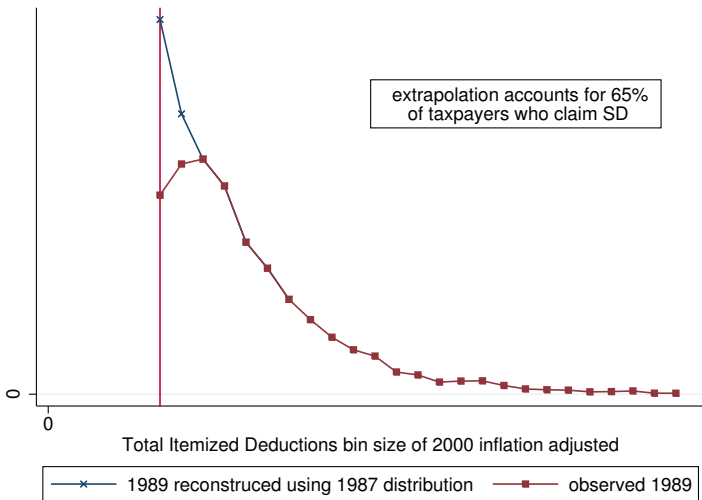
After Reform



After Reform



Reconstructed Distribution



Cost Estimates

For every bin compare missing mass to remaining mass to infer distribution

Eg: x% of mass is missing at 1st bin \implies x% forgo **more** than \$2000 of deductions etc.

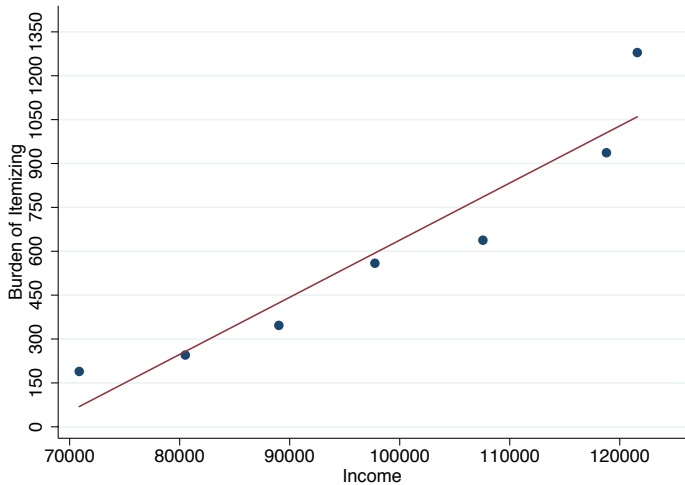
Average burden of itemizing equal to \$2202 worth of deductions

Taxpayers have marginal tax rate equal to 28%

\implies Corresponds to **\$644** (s.e. 54.1) of after tax dollars

Estimates from 1971 reform using 25% average marginal tax rate: \$996 (s.e. 126)

Income and forgone Benefits



Explanation of High forgone Benefits

What explains **magnitude** of the forgone benefit?

- 1 Preferences:** aversion to filing taxes: forgone benefits estimates suggest that taxpayers dislike filing taxes **4 times more** than working at their regular jobs. IRS cost estimates + aversion to filing taxes \Rightarrow **burden of tax filing \approx 1.25% of GDP**
- 2 Mistakes:** even with small cost **present bias** can lead to large forgone benefits

Present-Bias: Intuition

Present-bias model predicts that naive taxpayers **procrastinate** on filing taxes.

When deadline arrives (April 15th): will file taxes and itemize if cost of itemizing is smaller than benefit of itemizing.

Main feature: **record keeping cost increases** incrementally if receipt is not archived as soon as issued.

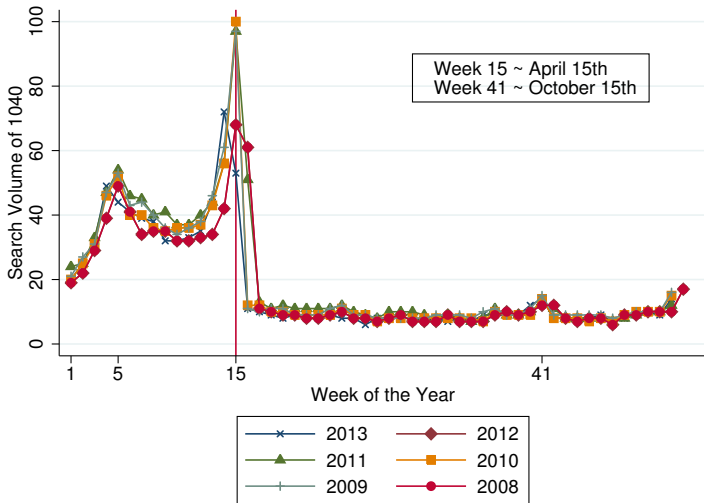
⇒ Naive-present-biased taxpayer procrastinates on archiving receipts and results in **large record keeping costs** leading to forgone deductions Model

Present-Bias: Predictions

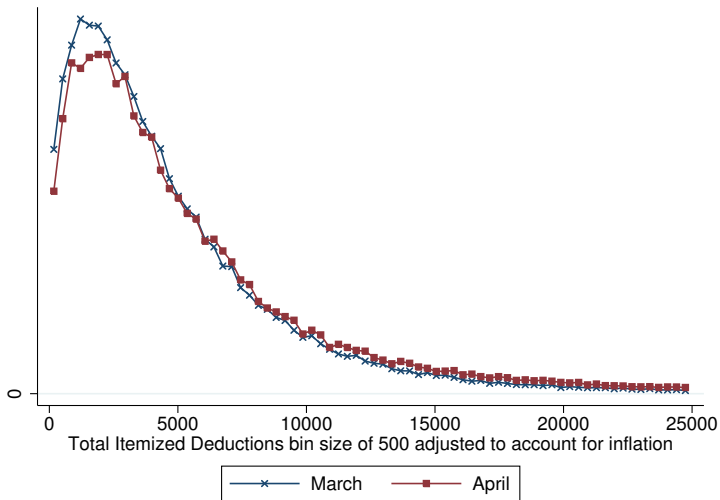
Predictions derived from model:

- 1 Naive present biased taxpayers procrastinate on archiving receipts and filing taxes until reach **deadline of April 15th**
- 2 Taxpayers who file close to deadline are more likely to **forgo larger amounts of deductions**

Google Search Volume of 1040 Form



March vs. April Filers



Alternative Explanations for Late Filing

Late filing hard to justify as rational decision:

1 Most taxpayers receive refund \Rightarrow should file as early as possible to save on **interest**

2 **Filing costs higher close to deadline:**

- Longer lines at USPS and HR Block
- Busy IRS hotline
- More road crashes on April 15th (Redelmeir and Yarnell (2012)).

3 Late filers tend to file **late again subsequent years** Graph
 \Rightarrow Suggests systematic bias

Failure of Revealed Preferences

Present-bias model implies failure of axiom of revealed preferences

⇒ Introduces **wedge between forgone tax benefits and cost of itemizing**

Use difference in missing mass for March vs April filers to estimate portion of forgone benefits due to late filing.

Find that present bias can account for 86% of forgone benefits.

Direct Policy Implications

Large PF literature focuses on **efficiency cost of taxation**

Feldstein (1999) estimates an efficiency cost of Personal Income Tax and Payroll Tax of 2 to 5%

⇒ Burden of tax filing impose burden of **similar magnitude** but easier to eliminate

Solutions to hassle costs:

- 1 Pre-populated** forms (also has advantage of reducing evasion)
- 2 Third party reporting** for charitable donations and medical expenses
- 3 Require electronic receipts** (easier to keep track of)

Indirect Policy Implications

Large literature on using cost of applying for welfare programs as way to screen welfare recipients: if individual is really poor then willing to pay **screening cost**

⇒ increasing relationship between income and forgone benefits gives credence to discriminating between poor and rich using administrative cost...

⇒ ...but policy maker could be underestimating costs and **screening too many** people...

⇒ ...and **details matter** when designing optimal screening mechanism to avoid discriminating **naive vs sophisticate** rather than poor vs poorer

Indirect Policy Implications

Some deductions are created as incentive for individuals to spend on **certain expenses** (charitable donations, medical expenses)

Present bias implies that taxpayers **respond to incentives but fail to claim deductions** because of time inconsistency

Government can provide incentives at **lower costs**

Similar to **marketing strategy** of providing coupons that can only be redeemed by mail: incentivize purchase but small redemption rate.

Conclusion

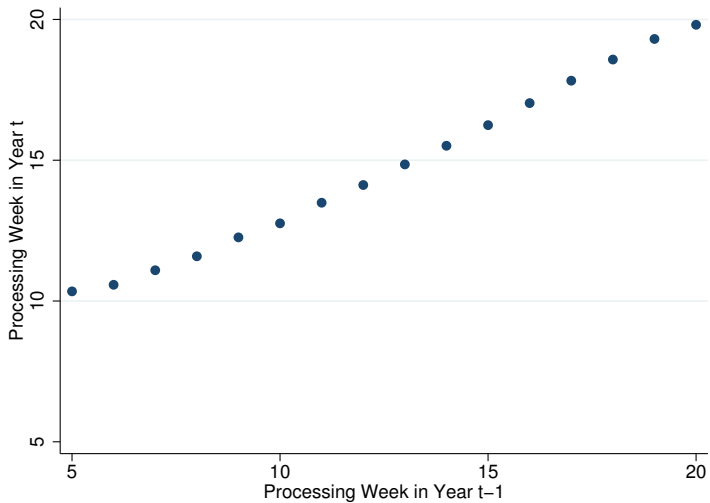
Taxpayers forgo benefits because of **hassle costs**

Magnitude of forgone benefits is large \Rightarrow suggest **high burden of tax filing**

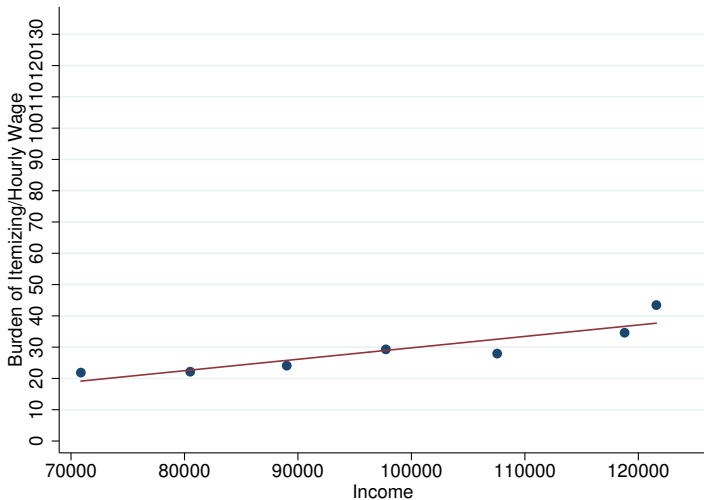
Large magnitude mostly explained by **time-inconsistency** of taxpayers rather than time spent filing returns or aversion to taxes

Burden can be easily reduced

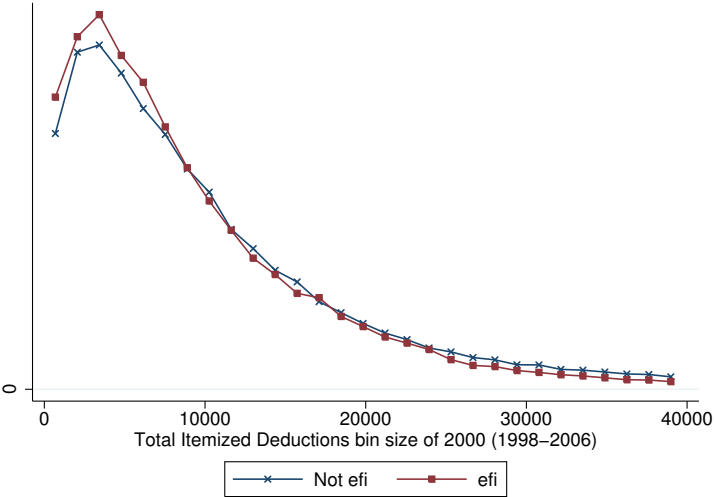
Late Filers More Likely to File Late Subsequent Year



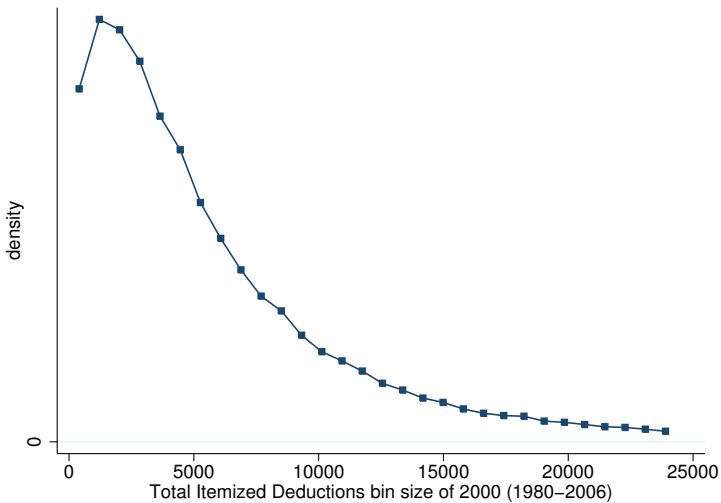
Hours Spent Itemizing



Electronic Filing Reduces But Does Not Eliminate Hassle Costs



Tax Preparers Do Not Eliminate Hassle Costs



Evasion

- 1 Inconsistent with increasing relationship between income and forgone benefits income and forgone benefits
- 2 Inconsistent with lower forgone benefits for e-filing e-filing
- 3 Only small percentage of deductions can be evaded (mortgage interest and state taxes are third party reported) deductions breakdown
- 4 Slemrod (1989) finds small charitable donation evasion (7.2%) when analyzing audited returns
- 5 Implausible calibration: would explain at most \$160 even with high audit probabilities calibration evasion

Evasion Calibration: True Audit Probabilities

Prob. audit=1%	Cost k of audit in dollars					
	50	100	150	200	250	300
CRRA coefficient						
0.5	4	4	5	6	6	7
1	5	5	6	7	7	8
1.5	5	5	6	7	7	8

Evasion Calibration: Inflated Audit Probabilities

Prob. audit=20%	Cost k of audit in dollars					
	50	100	150	200	250	300
CRRA coefficient						
0.5	88	99	110	121	132	144
1	91	102	114	127	139	152
1.5	94	106	119	132	146	160

back

Concave Kink Point

Price of deduction different above and below standard deduction: acts as a **concave kink point**.

- 1 Inconsistent with increasing relationship between income and forgone benefits (I control for MTR):
- 2 Inconsistent with lower forgone benefits for e-filing
- 3 Only small percentage of deductions can be adjusted: mortgage interest and state taxes are hard to adjust in short run
- 4 Saez (AEJ 2010), Kleven and Waseem (QJE 2013) and Tazhitdinova (2015) document large response to *convex* kink points but no response to *concave* kink points
- 5 Calibration with elasticity of 1 (Andreoni (2006)) suggests reduction in after tax deductions of \$106.

Rational Inattention

What if taxpayers are unsure about level of deductions they can claim and have to pay cost to discover it:

- 1** Focus on switchers \Rightarrow they know what level of deductions they had previous year
- 2** Calibrate RI model: need very high cost or very imprecise signal
- 3** To explain \$644 of forgone benefits uncertainty range of \$12,958 when total deductions are equal to \$10,000

Rational Inattention Calibration (inclusive of forgone benefits due to hassle costs: \$149)

CRRRA coefficient	Precision of Beliefs About Level of Savings (σ)				
	10	50	100	200	500
	0.1	149	149	149	150
0.25	149	149	149	151	160
0.5	149	149	150	153	171
0.8	149	149	150	154	184
1	149	150	151	156	193
1.1	149	150	151	157	197
1.25	149	150	151	158	203
1.5	149	150	152	160	213
1.8	149	150	152	162	225
2	149	150	153	163	233

Notes: Assumes cost of itemizing of \$149. Precision of beliefs is after tax: $\sigma = 500$ implies a standard deviation of deductions of \$1,785. [back](#)

Present-Bias: Model

Taxpayer has choice between itemizing today or tomorrow

Any utility experienced tomorrow is discounted by $0 < \beta < 1$

Naive present-biased believes that β will be equal to 1 next period

Itemizing provides benefit b in period $t + 1$ and has cost c_t in period t

Discount factor δ very close to 1 (omitted here)

Present-Bias: Model

Cost of record keeping **increases over time** if receipt is not archived

Define:

- b : benefit of itemizing
- k : cost of filling out form
- c : cost of record keeping
- $1+r$: rate of increase of cost over time
- δ : discount factor, assumed close to 1
- β : present bias parameter

Present-Bias: Model

Naive present biased taxpayer solves

$$\max_t \delta^t (-c(1+r)^t - k + \beta\delta b)$$

Everyday **believes will be rational** next day \Rightarrow Will procrastinate on archiving receipt when:

$$\beta(-c(1+r)^{t+1} - k + \delta b) \geq -c(1+r)^t - k + \beta\delta b$$

For δ close to 1, sufficient condition is:

$$\beta(1+r) \leq 1$$

\Rightarrow Taxpayer discounts future by more than rate of increase of record keeping cost. [back](#)