

Asymmetric Responses to Labor Income Taxation

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(A)symmetric Responses to Taxation

- Symmetric responses to tax changes are often implicitly assumed in the empirical literature
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 - VAT on price (Benzarti et al, 2020)
 - Taxes on GDP (Hussain and Malik, 2016; Jones et al, 2015)
 - ⇒ Nominal rigidities (Abbritti and Fahr, 2013; Fahr and Smets, 2010; Kim y Ruge-Murcia, 2009)
 - ⇒ Asymmetric responses on non-durable consumption (Hussain and Malik, 2016)

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 - ⇒ Asymmetric responses on non-durable consumption (Hussain and Malik, 2016)
 - Income tax on labor supply (experimental evidence)
 - ⇒ Tax averse behavior only when net wage decreases (Pfeil et al, 2024)

The Missing Piece: Asymmetric Responses to Labor Taxes

JOURNAL ARTICLE

The Elasticity of Taxable Income: A Meta-Regression Analysis

Carina Neisser ✉

The Economic Journal, Volume 131, Issue 640, November 2021, Pages 3365–3391, <https://doi.org/10.1093/ej/ueab038>

Published: 04 May 2021 **Article history** ▼



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Abstract

The elasticity of taxable income is a key parameter in tax policy analysis. To examine the large variation found in the literature of taxable and broad income elasticities, I conduct a comprehensive meta-regression analysis using information from 61 studies containing 1,720 estimates. My findings reveal that estimated elasticities are not immutable parameters. They are correlated with contextual factors and the choice of the empirical specification influences the estimated elasticities. Finally, selective reporting bias is prevalent, and the direction of bias depends on whether deductions are included in the tax base.

Contribution #1

Study **asymmetric responses to labor income taxation**
using micro-level data and a tax reform as source of quasi-exogenous variation

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using micro-level data and a tax reform as source of quasi-exogenous variation

- We exploit a massive 2007 tax reform in Uruguay
- Progressive scheme produced *winners* and *losers*
 - ⇒ Significant responses in **reported income** in both groups
 - ⇒ **Asymmetric responses** in magnitude: *losers* respond less than *winners*

Flat vs Progressive Income Taxation

- The **equity-efficiency trade-off** is at the core of income tax system's design
- From 90's, many developing economies moved towards **flat-rate tax regimes** (Keen et al, 2008)
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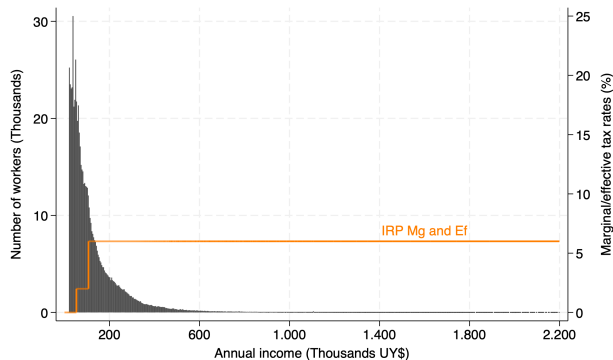
Contribution #2

Novel empirical evidence on the labor market effects of moving from
flat to progressive income taxation

Tax Reform

Massive Increase in Labor Income Tax Progressivity

Figure: Change in the tax schedule



1. Before: IRP

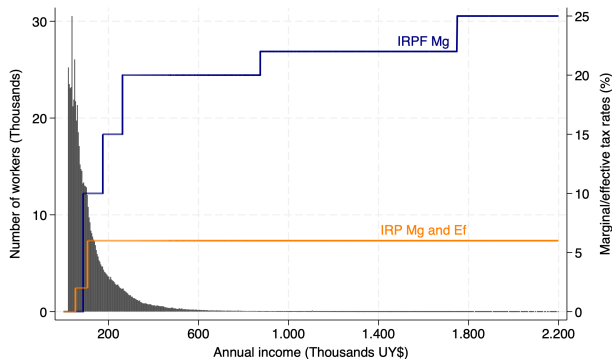
Established the following **flat rates**

- 0% → 0 to 3 MW (Minimum Wage)
- 2% → 3 to 6 MW
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Calculated at job level

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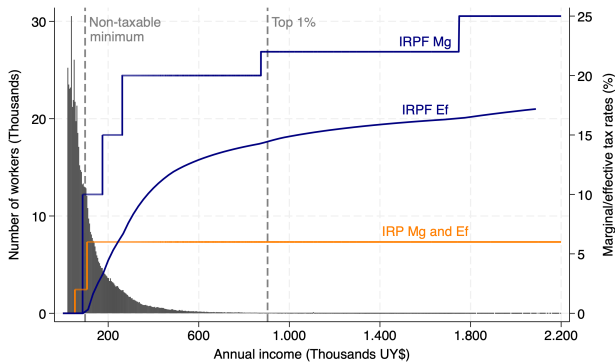
2. After: IRPF

Progressive marginal rates start at 10% and reach 25% in the highest income bracket

Calculated at total income level

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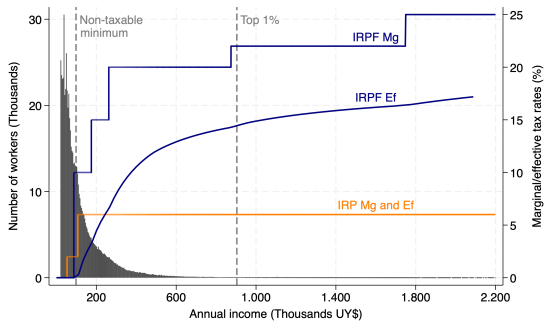
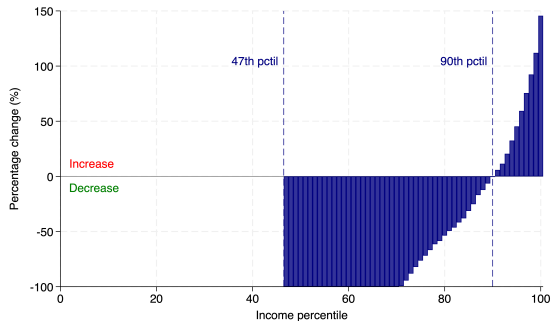


Figure: Increases in progressivity



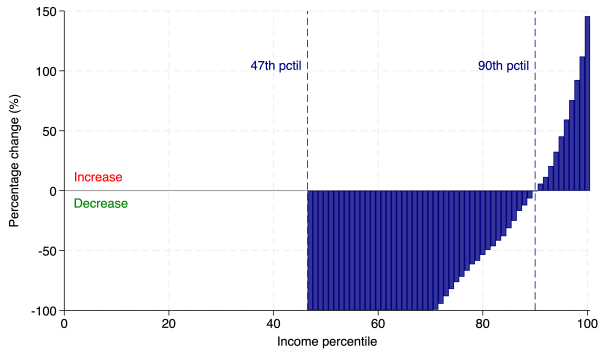
On average, top 10% faced a 61% tax increase, while the 47th-89th ptiles a 69% reduction

Data and Identification Strategy

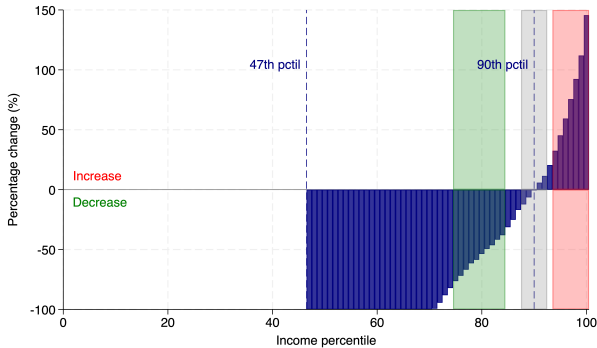
Data

- **Administrative records** from the labor histories of the universe of formal workers in Uruguay
(from Social Security Administrator)
- **Period:** 2002-2012
- Study focuses on **highest income quartile**
 - Interesting setting to analyse asymmetric responses
 - Allows to (partially) control for heterogeneous unobservable characteristics
- Set of **variables:** gross labor income and hours worked for each firm, activity sector, firm location, sex, age, among others

Diff-in-Diff Design



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Winners: reduction > 2 pp & income > p75

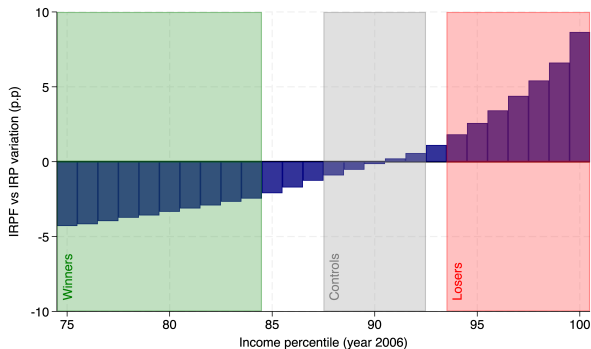
Controls: change < 1 pp

Losers: increase > 2 pp

Diff-in-Diff Design

$$\log(\text{gross_income}_{it}) = \sum_{t \neq s1.07} \beta_k \mathbb{I}_{\{\text{sem}=t\}} \cdot \text{Treat}_i + \delta' X_i + \alpha_i + \lambda_t + \varepsilon_{it}$$

$$X_i = X_{it}, X_{i,s1.07}, X_{it} \mathbb{I}_{\{\text{sem}=t\}}, X_{i,s1.07} \mathbb{I}_{\{\text{sem}=t\}}$$



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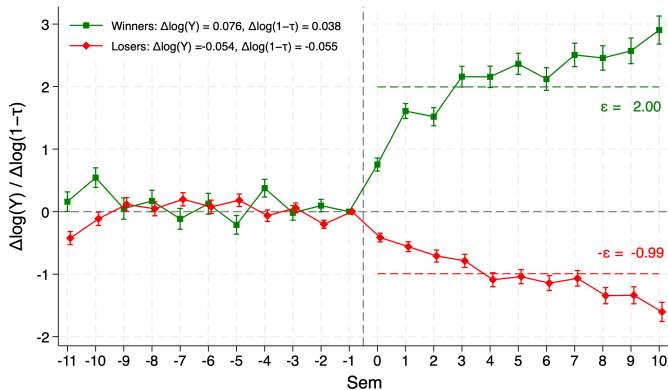
Results

Winners' elasticity doubles that of losers

► ATR vs MTR

► Robustness

Figure: Responses in reported income

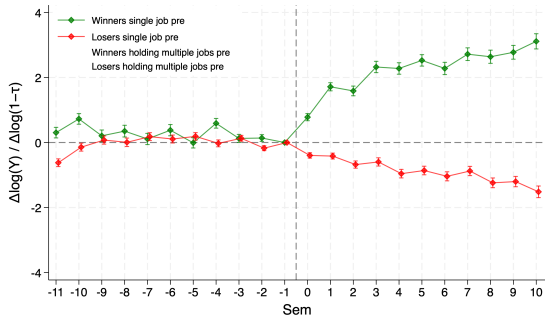


Notes: Clustered standard errors at the worker level (95% CI). Data: BPS.

Digging into the Asymmetry

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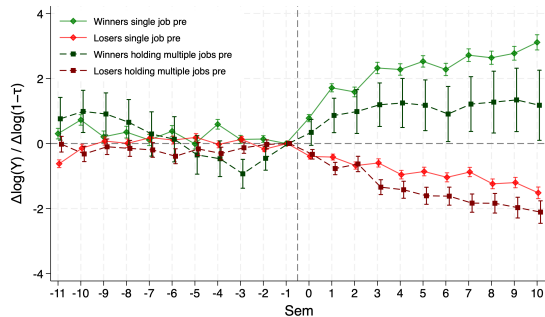
Figure: By pre-reform workload level



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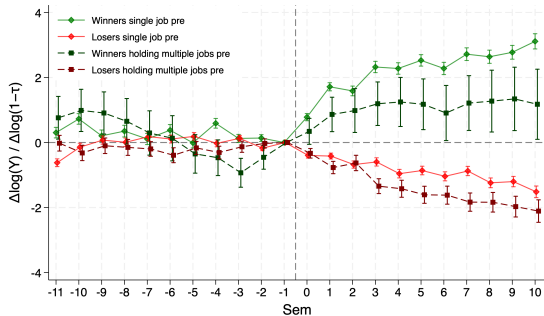
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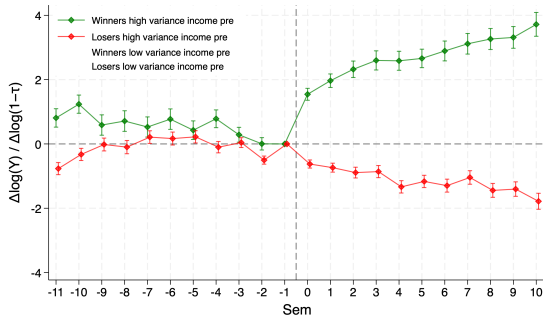
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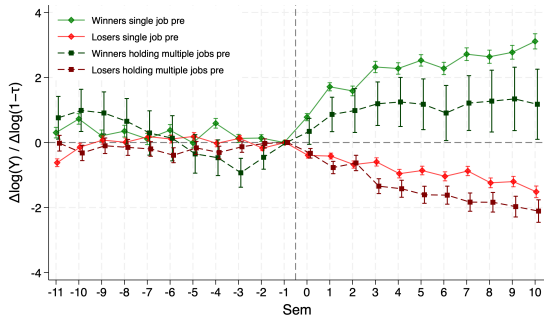


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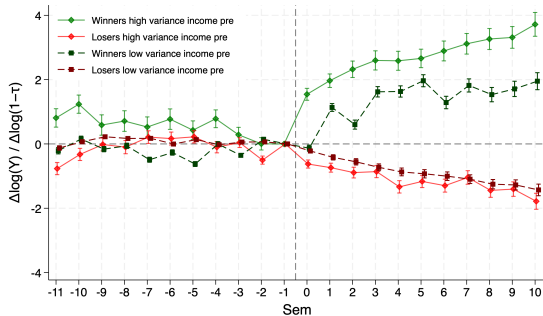
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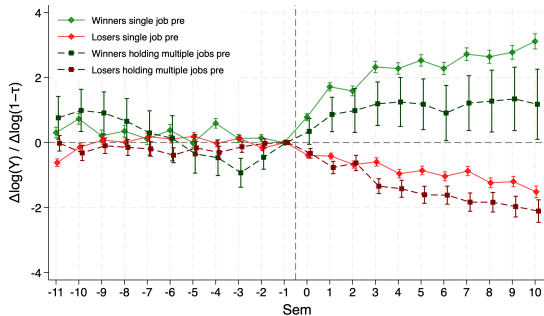


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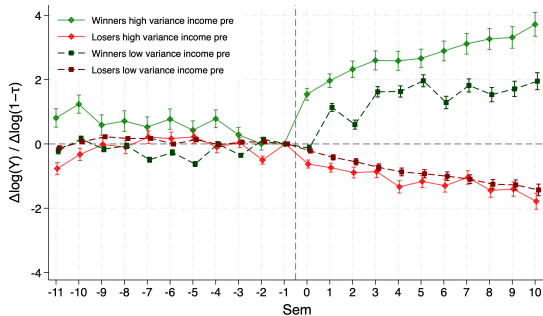
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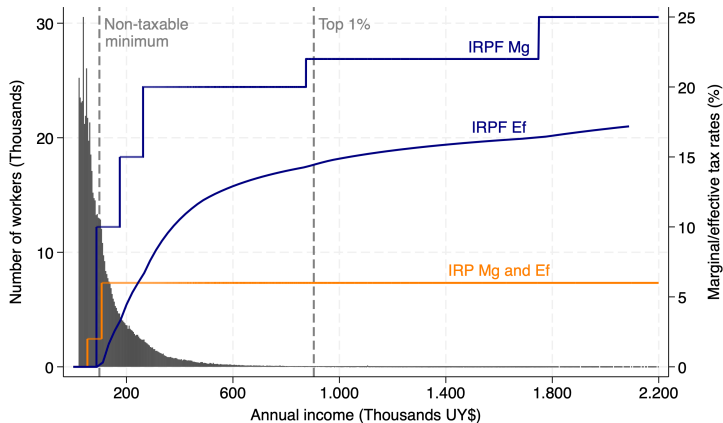
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⇒ Job/worker characteristics matter, but tax change direction does too!

Further Analysis

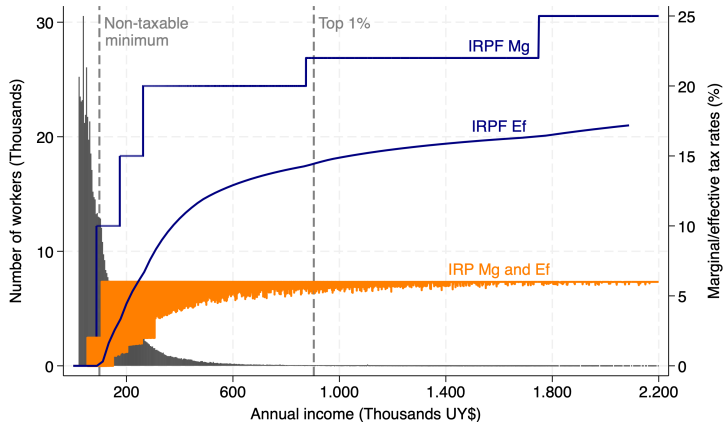
Multiple Job Holding Workers were More Intensively Treated

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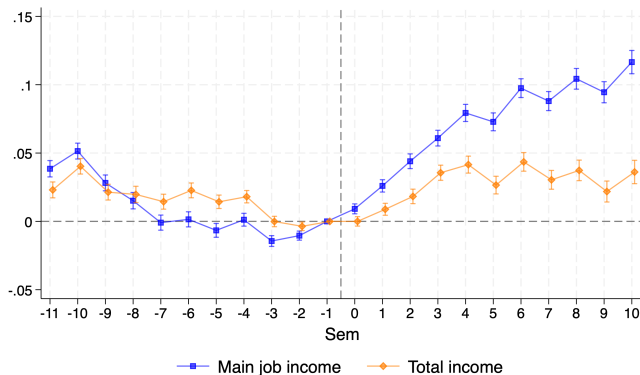


Reduction in Income from Secondary Jobs

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Concluding Remarks

- Tax reform in Uruguay offers a unique quasi-experimental setting to study asymmetric responses to labor income taxation
- Tax changes triggered significant behavioral responses
- **Responses are asymmetric:** workers reacted more strongly to tax cuts than to tax increases
⇒ Policy implication: assuming symmetric responses may mislead evaluations of tax reforms
- **Tax design matters:** tax schemes may unintentionally distort incentives and lead to a misallocation of human capital

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New Wave of Flat Taxes [▶ Back](#)

Economy

Flat tax for all? Italy announces plan to overhaul tax system



Clare Speak - clare.speak@thelocal.com

Published: 17 Mar, 2023 CET. Updated: Fri 17 Mar 2023 08:34 CET

[f](#) [t](#) [in](#)



Italy's Prime Minister Giorgia Meloni's far-right Brothers of Italy made a flat tax one of the cornerstones of its election campaign. (Photo by Alberto PIZZOLI / AFP)

The Italian government on Thursday night approved changes to the tax system as it moves ahead with plans for a 'flat tax' for all employees by 2027.

17 Mar, 2023

POLITICS - GOVERNMENT

Kansas senators pass sweeping 4.75% flat income tax

Effort by Democratic senator to amend the bill with a graduated income tax system met with mockery by opponents

BY ALLISON KITE - FEBRUARY 23, 2023 7:43 PM

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23 Feb, 2023

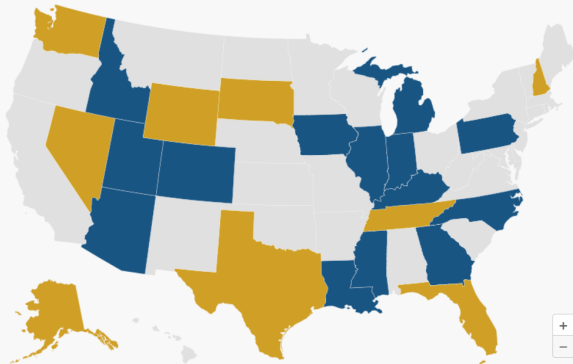
US States Moving Towards Flat Taxes

[▶ Back](#)

States Inaugurate a Flat Tax Revolution

State Individual Income Tax Structures as of January 2025

■ Flat Income Tax ■ No Wage Income Tax ■ Graduated Income Tax



Washington taxes the capital gains income of high earners.

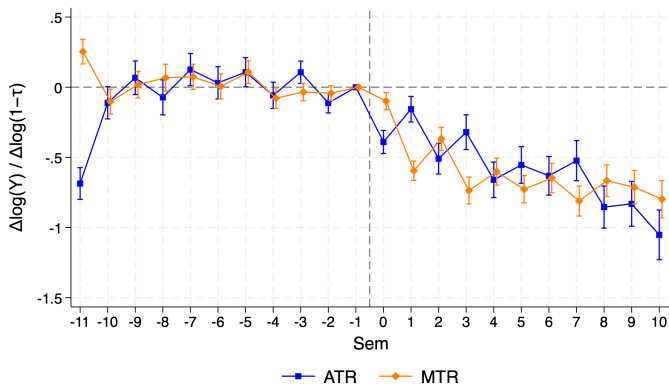
Source: Tax Foundation; state tax statutes, forms, and instructions; Bloomberg BNA.

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Data: Tax Foundation (taxfoundation.org/blog/flat-tax-state-income-tax-reform/)

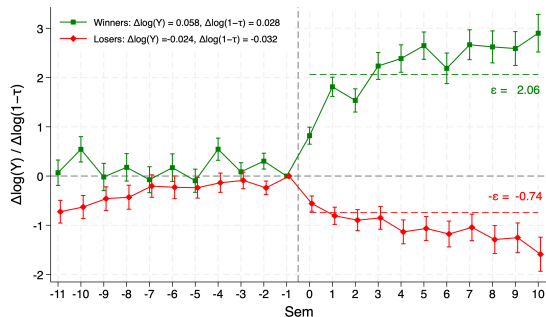
Figure: Responses in reported income



Notes: Clustered standard errors at the firm level (95% CI). Data: BPS.

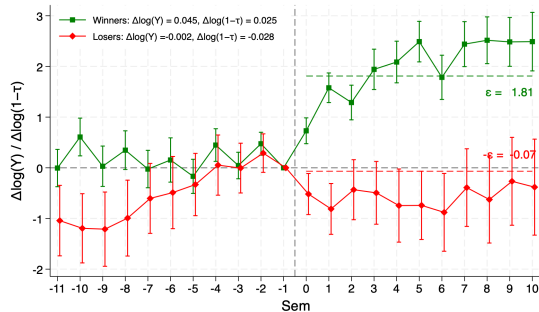
Asymmetry Persists Among Closer Income Groups [Back](#)

Figure: Income percentiles 83-96



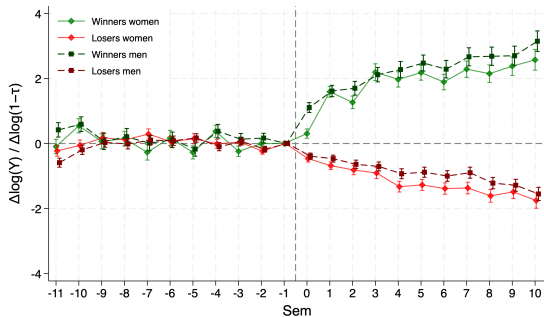
Notes: Clustered standard errors at the worker level (95% CI). Data: BPS.

Figure: Income percentiles 85-94



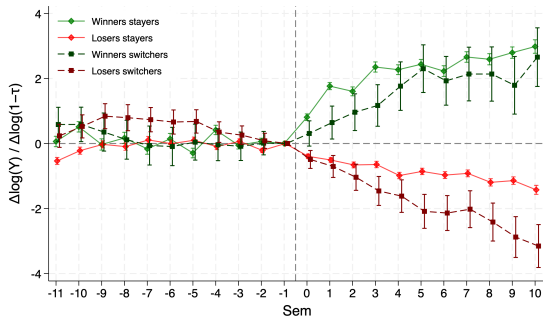
Notes: Clustered standard errors at the worker level (95% CI). Data: BPS.

Figure: By gender



Notes: Clustered standard errors at the worker level (95% CI). Data: BPS.

Figure: By mobility



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