

THE FIRM AS TAX SHELTER

MICRO EVIDENCE AND AGGREGATE IMPLICATIONS OF CONSUMPTION THROUGH THE FIRM

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MOTIVATION

- *Consumption through the firm* prevents business income from being taxed as a distribution – either as dividends or wages – and inflates firm costs.
- It is a *margin of tax evasion* that **circumvents CIT, PIT & VAT**, regardless of differences in tax rates between L and K, and irrespective of how broadly the tax bases are designed.
- It does not require tax sophistication and it is almost impossible to enforce given the *wide range of expenditures that lie on the border between business and personal consumption*.
- Has important **implications** for the measurement of the *scale of tax evasion* and *income inequality*, and it might distort the measurement of household's final consumption and firms' intermediate consumption, and result in undervaluation of the GDP.

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Despite these implications, **consumption through the firm has not been well studied.**

STATE OF ART

- The literature has focused on the flexibility of owner-managers to choose how to label business income to minimize taxes at payout and to use firms as tax-free saving vehicles through strategic earnings retention (Smith et al., 2021; Miller et al., 2020).
- Some authors have suggested it as a payout strategy among individuals who control firms (Kopczuk and Zwick, 2020; Alstadsæter et al., 2014; Clotfelter, 1983).
- For example, following a reform that increased dividend taxes in Norway in 2006: *"While all categories of assets grow, the increase in durable asset categories that include company cars, planes, and boats is particularly striking"* (Alstadsæter et al., 2014).

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Yet, the press is full of colorful anecdotal evidence... [► Sources](#)

Former Caja Madrid directors accused of misusing company credit card

Eighty-three executives collectively spent €15m over 10 years at savings bank that merged to become Bankia before 2012 bailout



Ex-Bankia chair Rodrigo Rato, above, and former Caja Madrid CEO Miguel Blesa have been summoned to appear before a judge over the scandal. Photograph: Dominique Faget/AFP/Getty Images Photograph: Dominique Faget/AFP/Getty Images

Fresh evidence is emerging of the spendthrift lifestyle of the directors of the once-mighty Caja Madrid savings bank even as the 300-year-old institution drifted into crisis.

The 83 directors were each issued with a "black" credit card, with the collective bill reaching €15m (£12m) over a 10-year period. The money was spent on holidays and shopping trips, with €3m spent in restaurants.

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CEOs, Bankers Used Corporate Credit Cards for Sex, Says New York Madam

Wall Street exposed as convicted escort boss reveals client list of 9,800.

By ABC News

February 5, 2009, 9:37 PM



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Enquête

Carlos Ghosn: quand le patron de droit divin revient sur la réunion de sa cour à Versailles

Dans son audition au Liban que révèle «Libération», le magnat de l'automobile, interrogé pour la première fois sur ses «dépenses personnelles» prises en charge par Renault-Nissan, a tenté de justifier maladroitement les fastes d'une soirée payée par l'alliance le jour de son anniversaire.



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- This paper uses data from *social security records* and *electronic invoices* in Portugal:
 - Monthly consumption expenditures covering ≈ 70 -75% of the net-of-VAT final consumption expenditures of resident households recorded in National Accounts.
 - Monthly business expenditures covering all business-to-business transactions.
 - Social security records capturing transitions from employee to business manager.
- Use panel event studies exploiting:
 - The variation in the flexibility to treat some forms of personal consumption as business expenditures that accompanies the employee-to-manager transition.
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- 1 Introduction
- 2 Background and data
- 3 Consumption through the firm: Micro evidence
- 4 Aggregate implications
- 5 Conclusion

BACKGROUND AND DATA

ELECTRONIC INVOICES: THE E-FATURA SOFTWARE SYSTEM

- e-Fatura is an electronic invoicing software adopted in 2013 to fight VAT fraud.
- For **firms** and other legal entities, electronic invoicing is mandatory, so e-Fatura cover the universe of business-to-business transactions.
- For **final consumers**, the government provides a set of incentives for them to ask for an invoice with their taxpayer number at the time of the purchase:
 - Weekly lotteries with a prize of 35,000 euros each.
 - Rebate on personal income tax of 15% of the VAT supported on restaurants, hairdressers, vets, car repair.
 - Deduction to personal income tax of 35% of all expenditures (up to 500 euros), plus 15% of the expenditures on health, education and transport expenditures.
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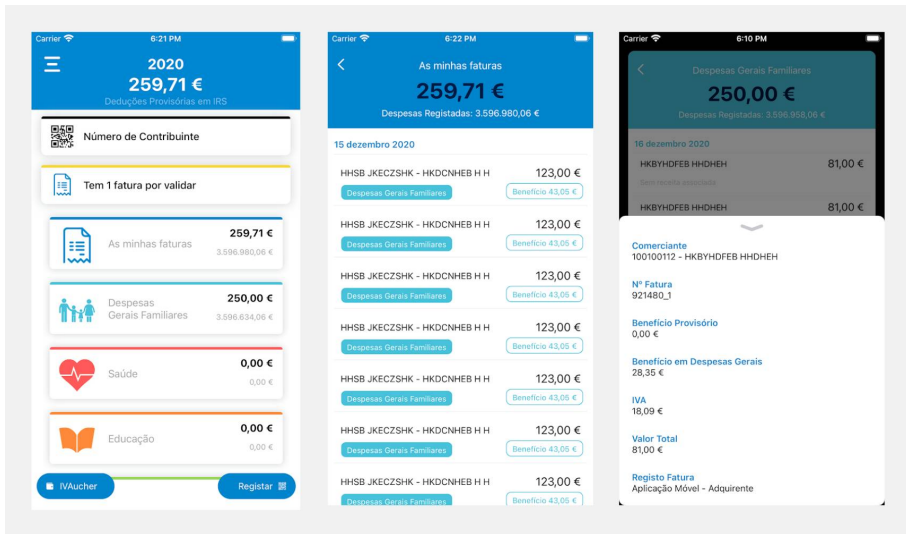
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EXAMPLE OF THE E-FATURA ONLINE ACCOUNT



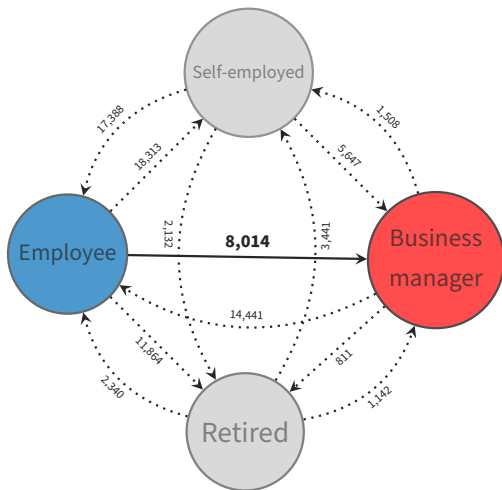
EMPLOYEE-TO-MANAGER TRANSITIONS

Two distinct social security regimes:

- **Employees**
- **Business managers**

Social security records provide data on the month individuals start contributing under a regime $\Rightarrow$ stocks & flows

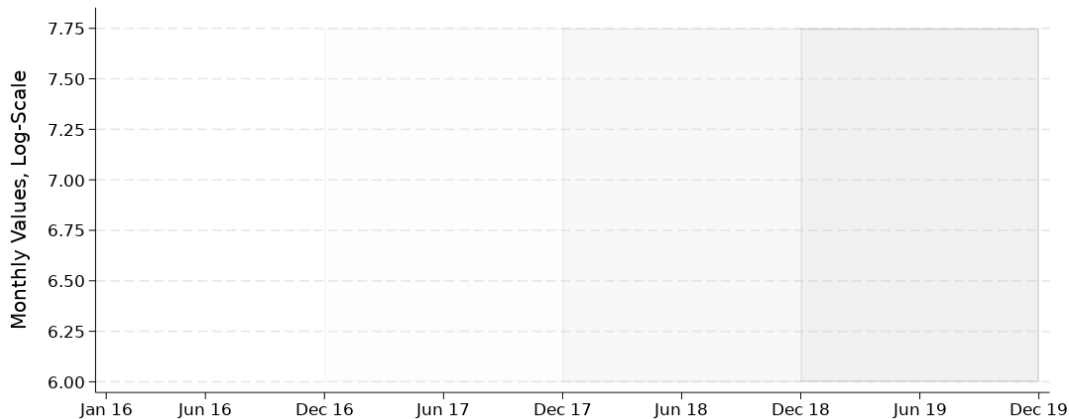
Focus: individuals who switch from **Employee** to **Business manager** from Jan-2016 to Dec-2019



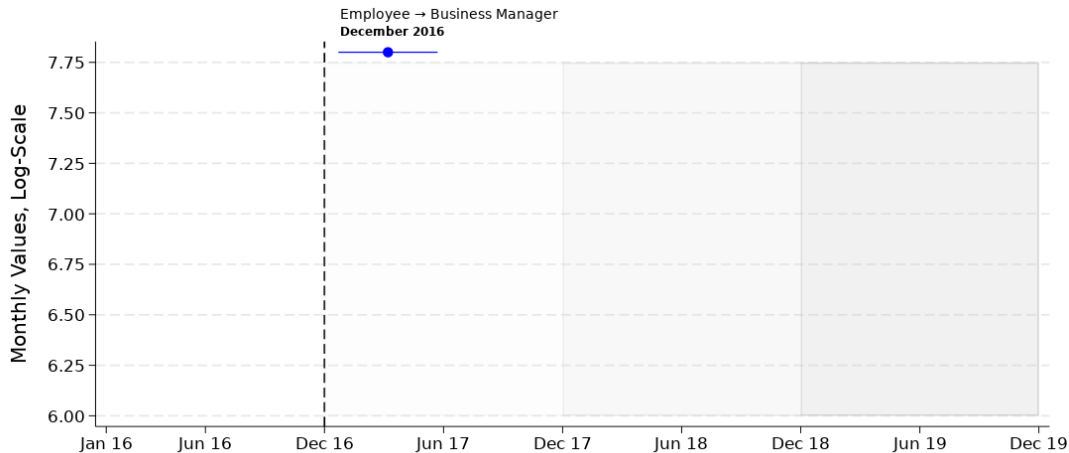
ANALYSIS DATASET

	2016	2017	2018	2019	2016-2019
<i>Individuals</i>					
Switchers	6,973	7,272	7,418	8,014	29,677
Spouse/partner	4,032	4,075	3,896	3,991	15,994
Children/others	6,514	6,503	6,294	6,498	25,809
All individuals	17,519	17,850	17,608	18,503	71,480
Share who stay 48 months	0.82	0.78	0.72	0.68	0.77
<i>Matched with Monthly Expenditure data</i>					
Total Observations	5,237,167	5,617,369	6,024,052	6,601,955	23,480,543

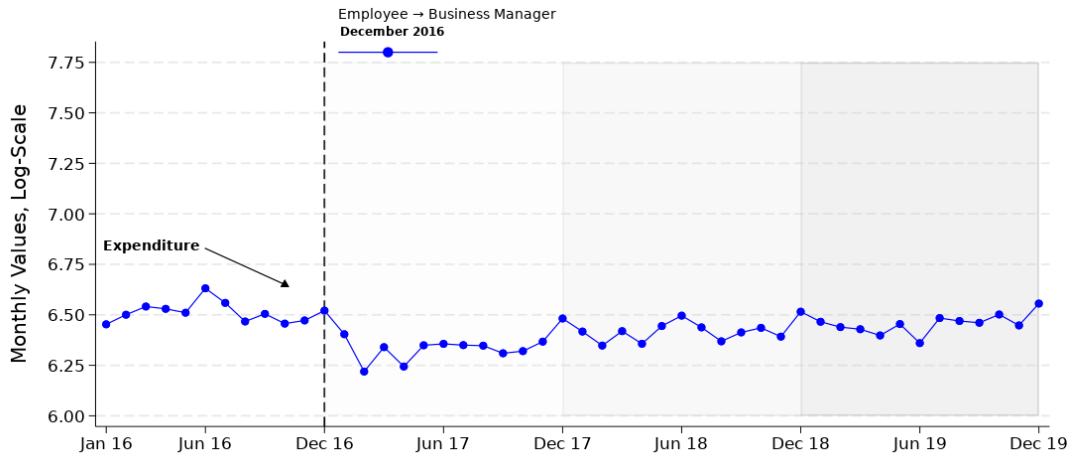
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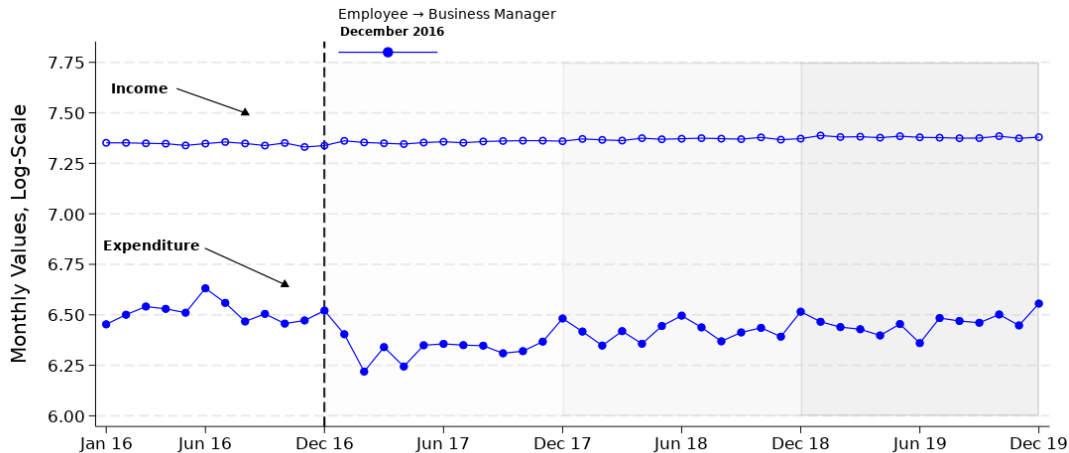
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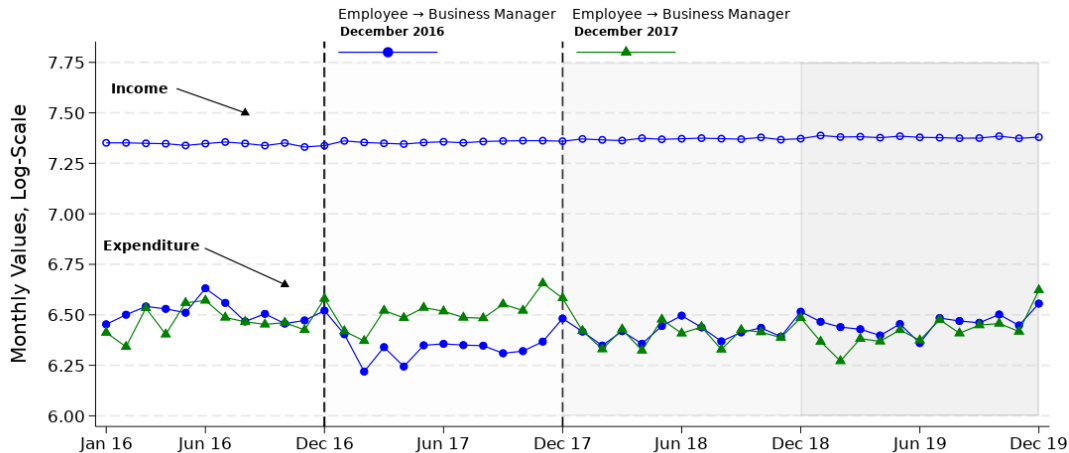
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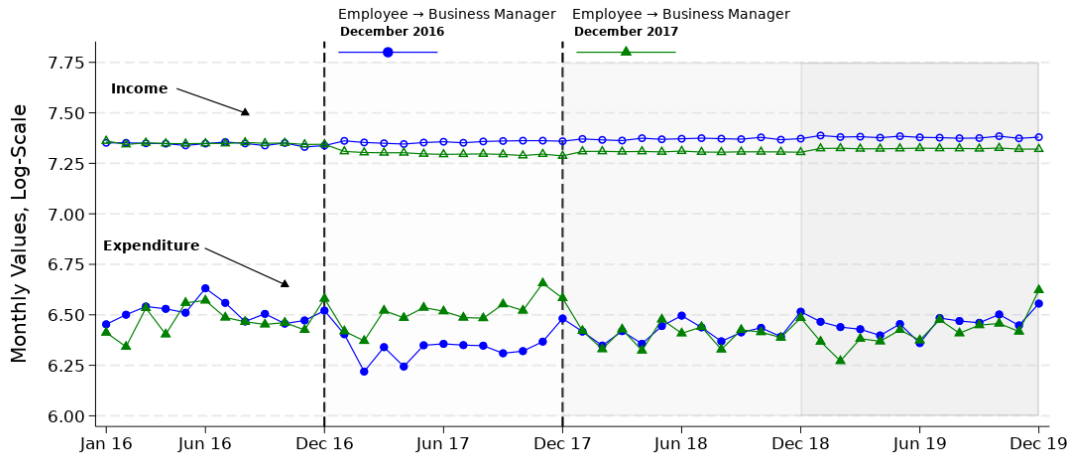
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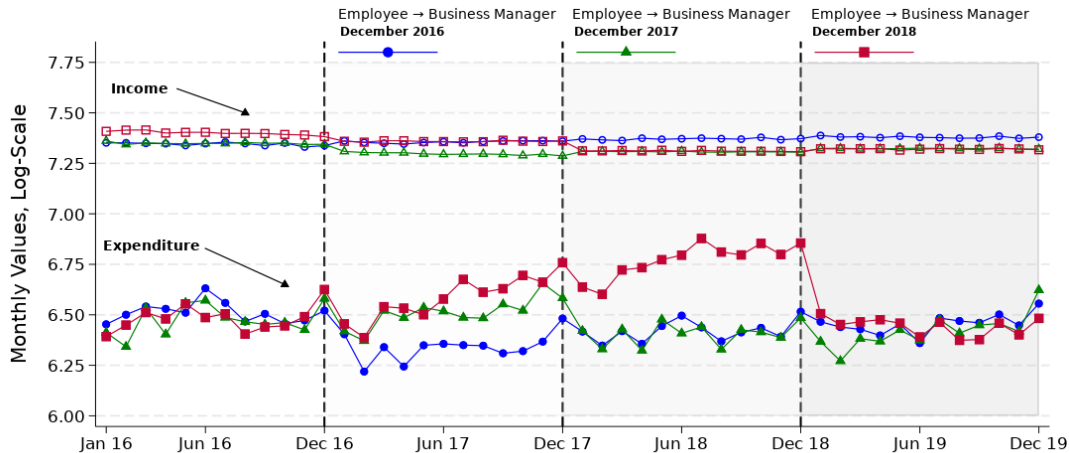
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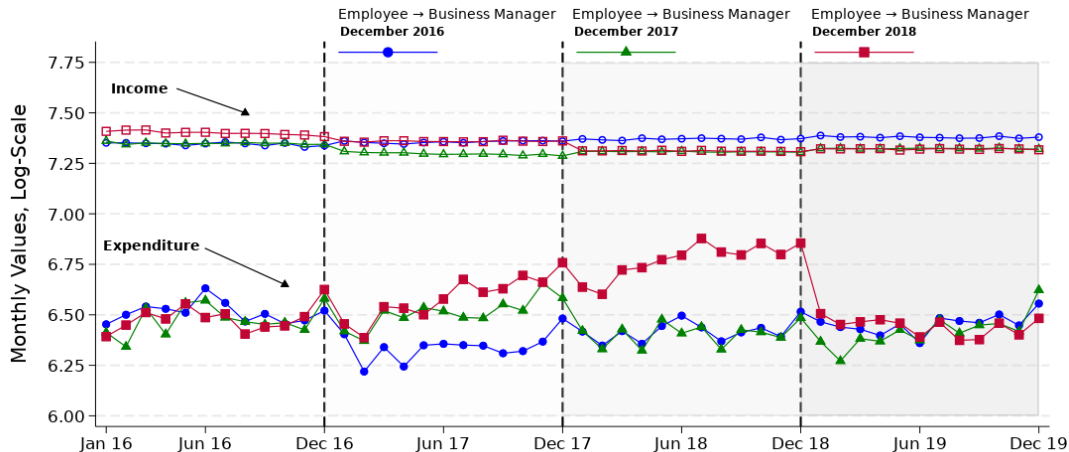
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CONSUMPTION THROUGH THE FIRM: MICRO EVIDENCE

EVENT STUDIES WITH STAGGERED ADOPTION

I estimate how monthly personal expenditures evolve after an individual chooses to switch from being an *employee* to being a *business manager* with an event study:

$$\log(y_{it}) = \alpha_i + \lambda_t + \sum_{g \in G} \delta_g \cdot \mathbf{1}[t - E_i \in g] + \varepsilon_{it}, \quad (1)$$

- i indexes individuals and the t indexes calendar months, y_{it} is the reported monthly expenditure, λ_t is a year-by-calendar month fixed effect and δ_i is an individual fixed effect, $e_{it} = t - E_i$ is the event time, the set G collects disjoint sets g of *relative periods* $l \in [-T, T]$.
- To account for the heterogeneity in treatment timing, I estimate the event study using the estimator from Callaway and Sant'Anna (2020).
- Estimates derived with the estimators of De Chaisemartin and D'Haultfoeuille (2020) and Borusyak et al. (2021) are invariant to the specification choice.

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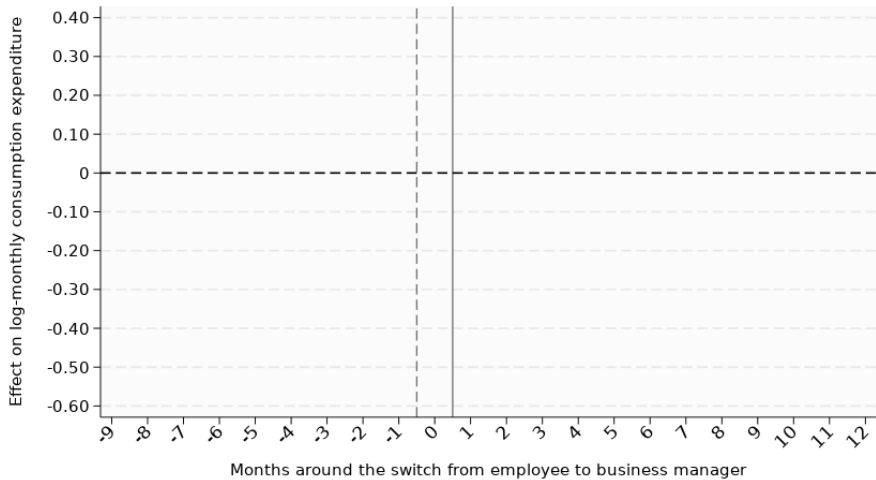
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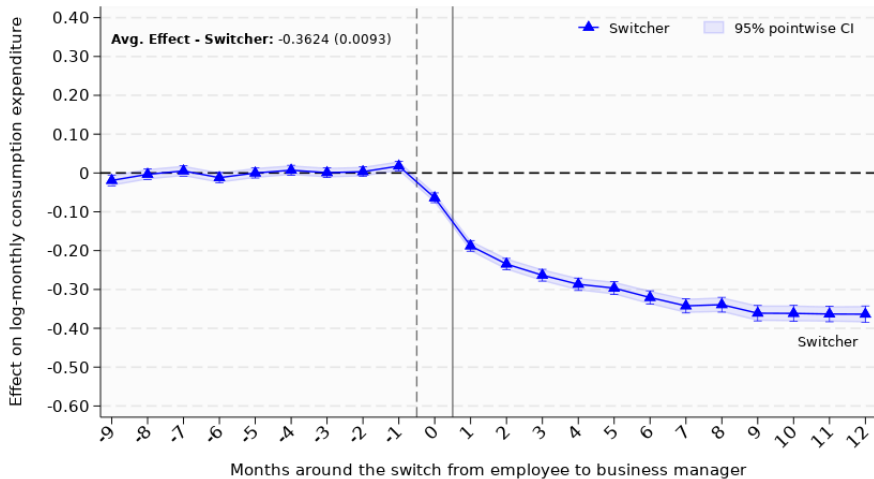
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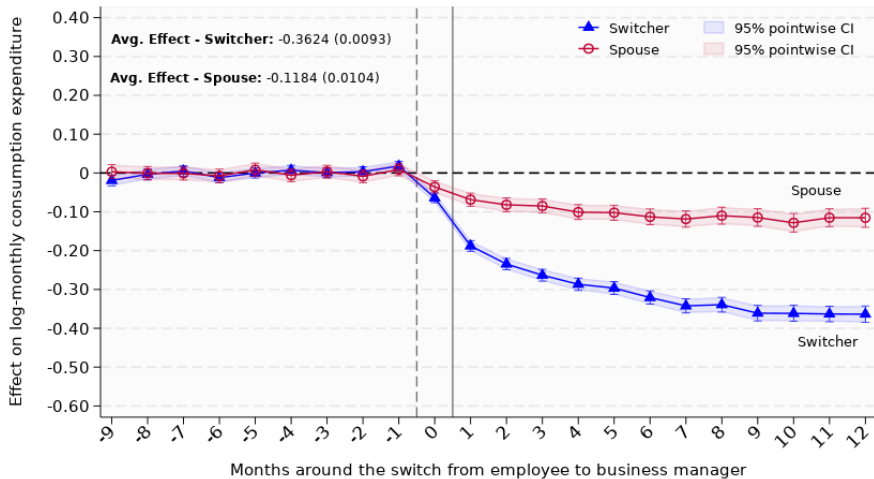
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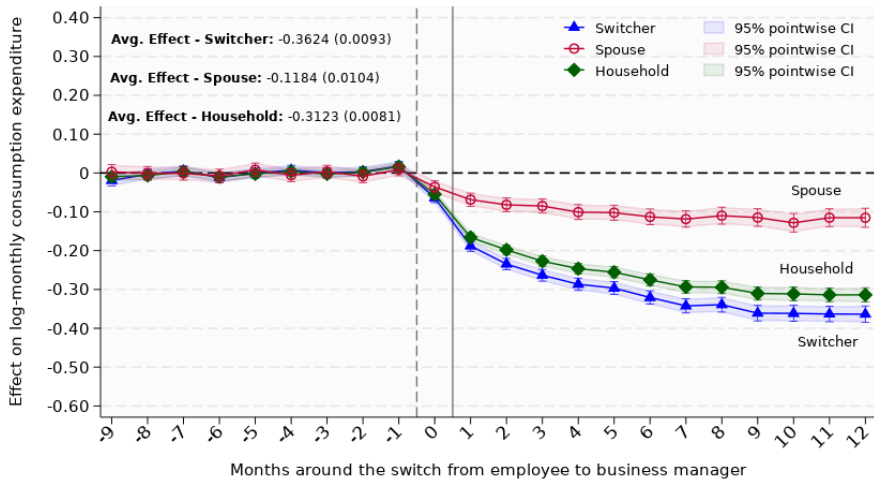
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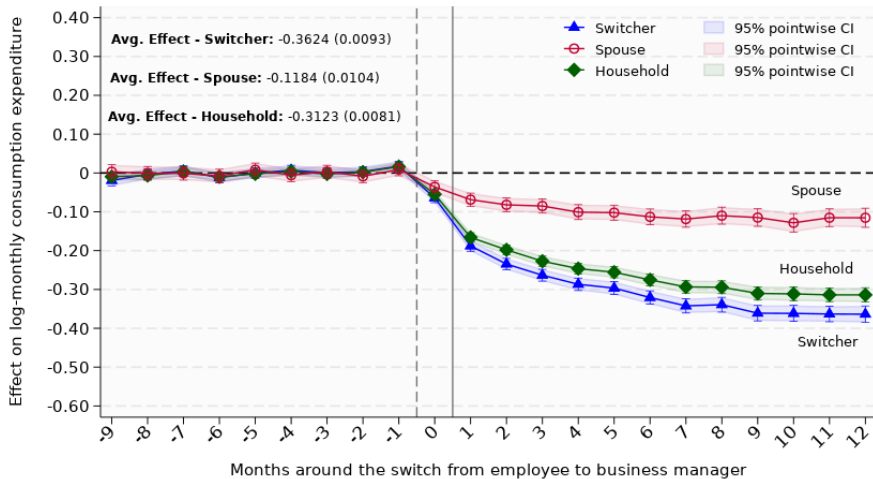
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INCOME SHOCK?

- Individual expenditures drop by about 36% when individuals become managers (20% in the first month after becoming business manager).
- Spouse's expenditures drop by spouse by about 12% and combined household expenditures drop by about 31%.
- Is this alternatively the result of an income shock and/or increases in savings?
 - Income Shock? Employees opening their own business but earning less business income as compared to labor income.
 - Prudence? Individuals become entrepreneurs and increase precautionary savings in face of uncertain business incomes.
- If it is a shock to income, all consumption should react, but...

INCOME SHOCK?

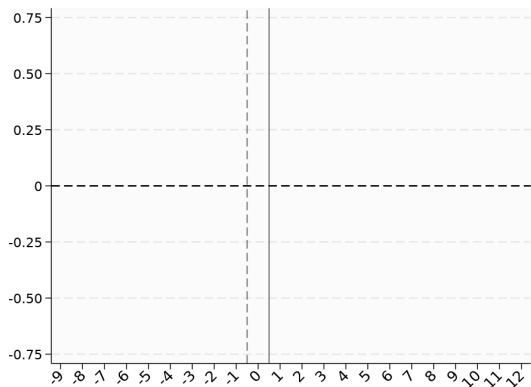
- Individual expenditures drop by about 36% when individuals become managers (20% in the first month after becoming business manager).
- Spouse's expenditures drop by spouse by about 12% and combined household expenditures drop by about 31%.
- Is this alternatively the result of an income shock and/or increases in savings?
 - Income Shock? Employees opening their own business but earning less business income as compared to labor income.
 - Prudence? Individuals become entrepreneurs and increase precautionary savings in face of uncertain business incomes.
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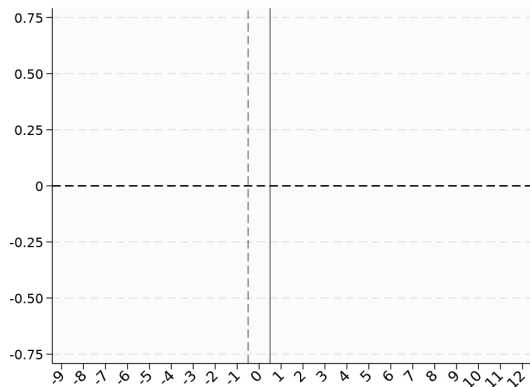
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BORDERLINE VS. HARD-TO-SHIFT EXPENDITURES

Wholesale & retail trade; car repair

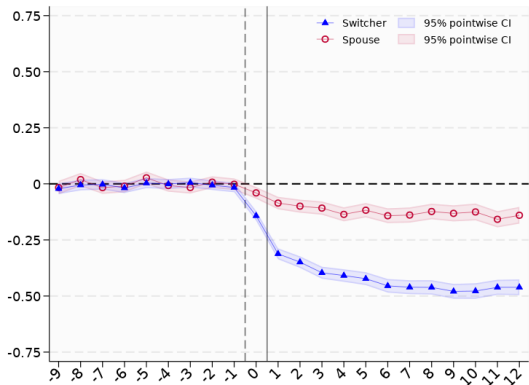


Nonessential health services



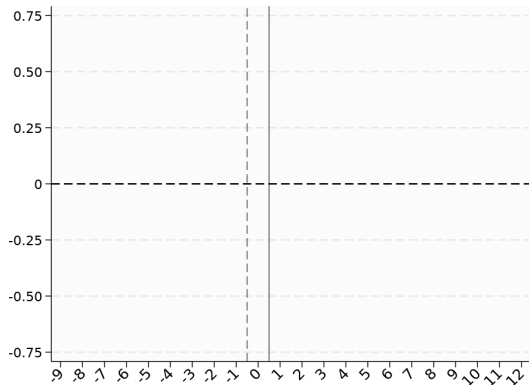
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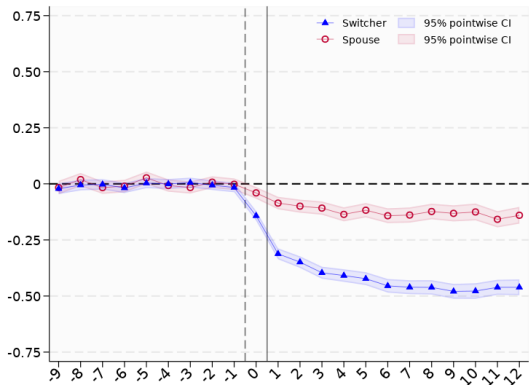
Supermarkets, clothing and shoes, household equipment,
food and beverages, fuel and car repair.

Nonessential health services



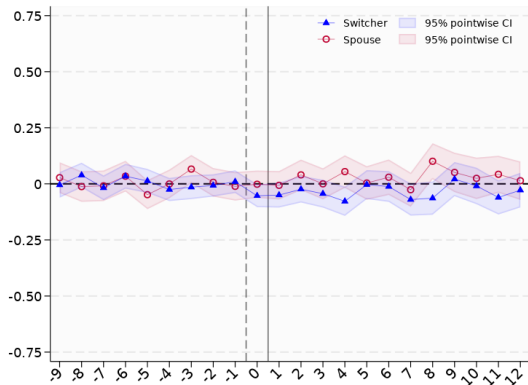
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Supermarkets, clothing and shoes, household equipment, food and beverages, fuel and car repair.

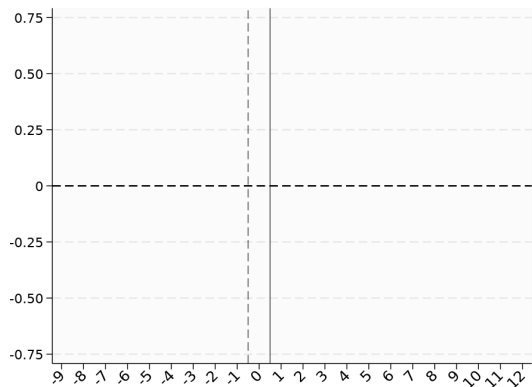
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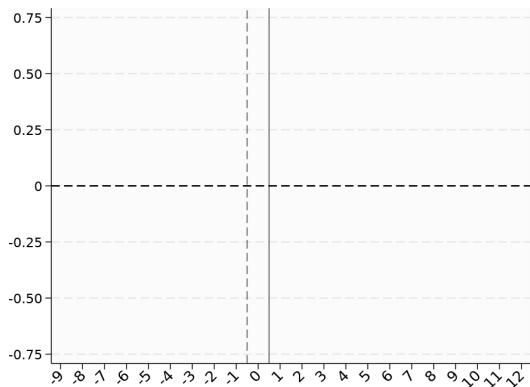
Nonurgent medical services provided by the private sector, namely dentistry and therapy.

BORDERLINE VS. HARD-TO-SHIFT EXPENDITURES

Hotels & restaurants

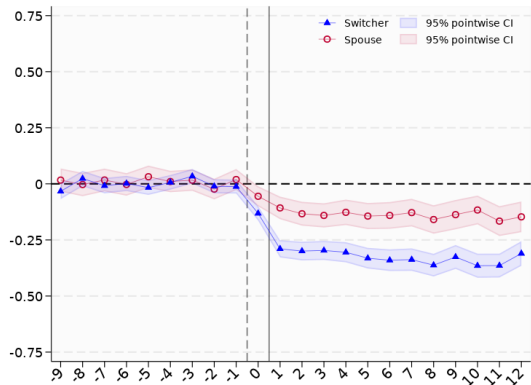


Private education

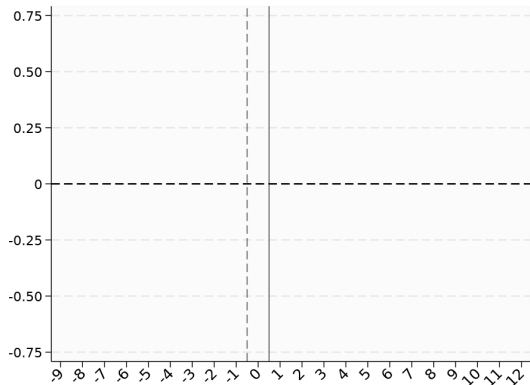


BORDERLINE VS. HARD-TO-SHIFT EXPENDITURES

Hotels & restaurants



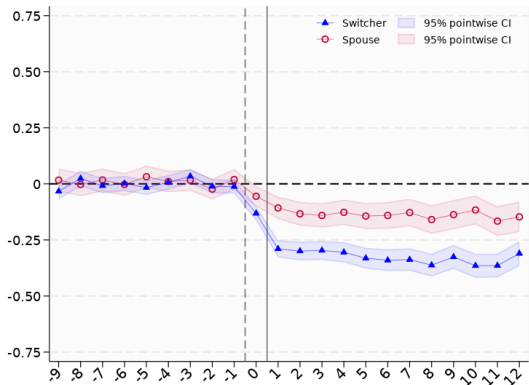
Private education



Hotels, holiday and short stay accommodation, catering, food and beverage service activities.

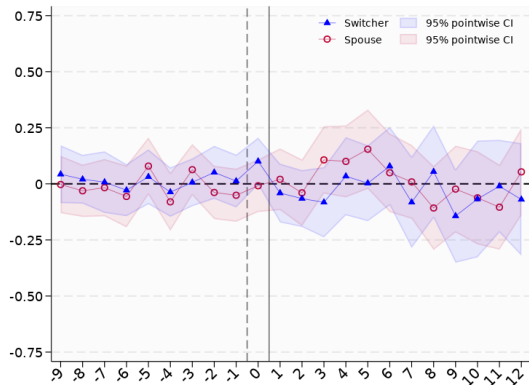
BORDERLINE VS. HARD-TO-SHIFT EXPENDITURES

Hotels & restaurants



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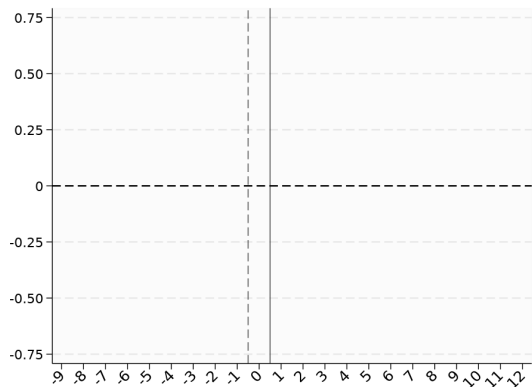
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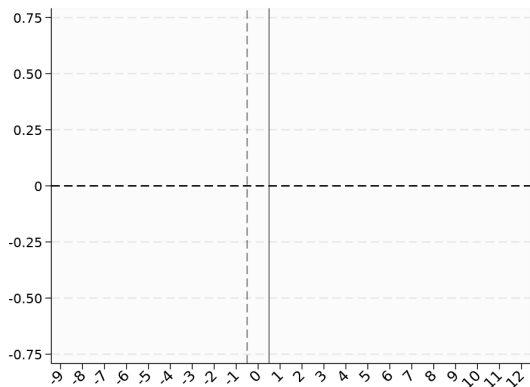
Education services provided by the private sector, namely private tutoring and sports, and cultural activities.

BORDERLINE VS. HARD-TO-SHIFT EXPENDITURES

Information & communication

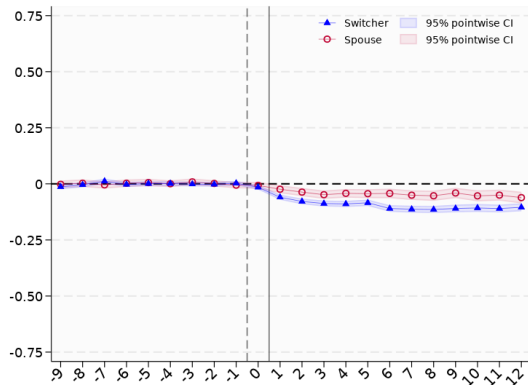


Electricity, gas & air conditioning



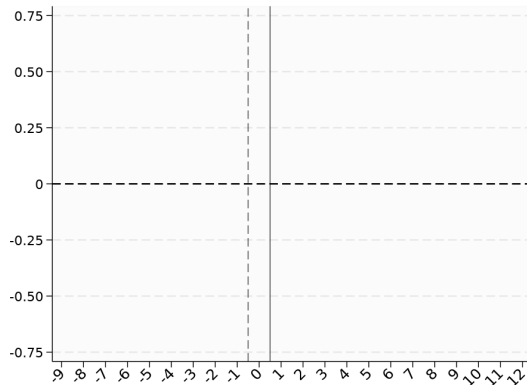
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Information & communication



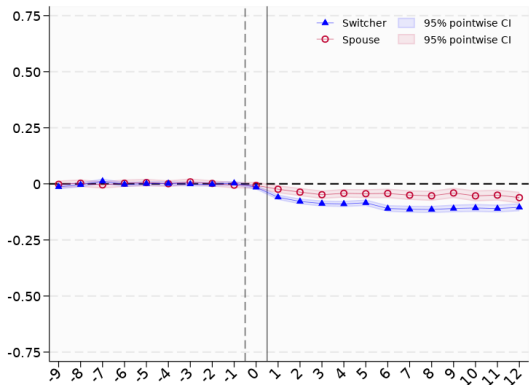
Mobile phones, internet, television, and other telecommunication services.

Electricity, gas & air conditioning



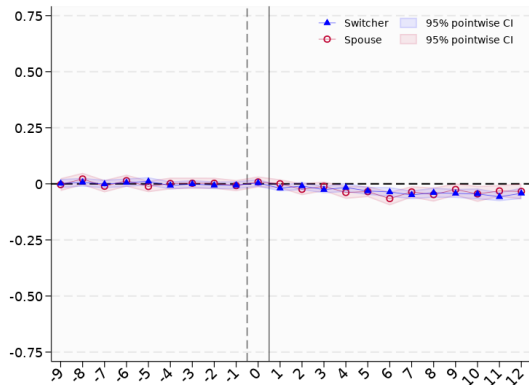
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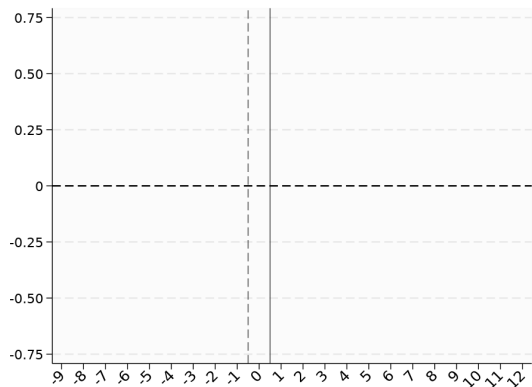
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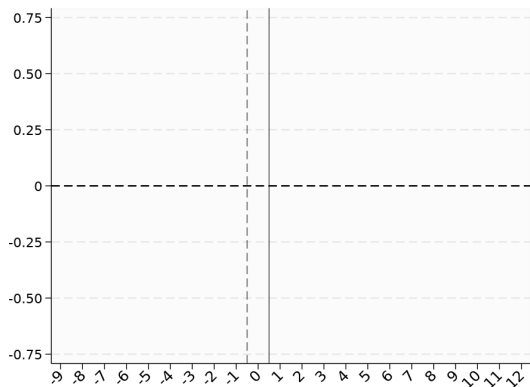


BORDERLINE VS. HARD-TO-SHIFT EXPENDITURES

Technical activities

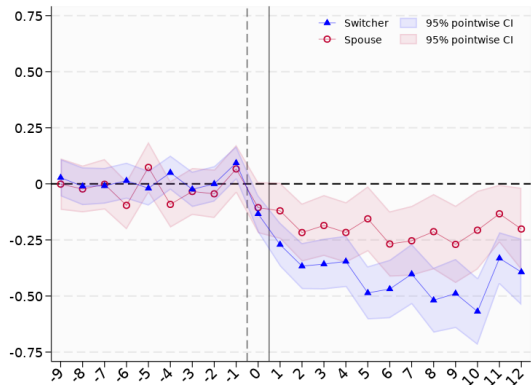


Water distribution



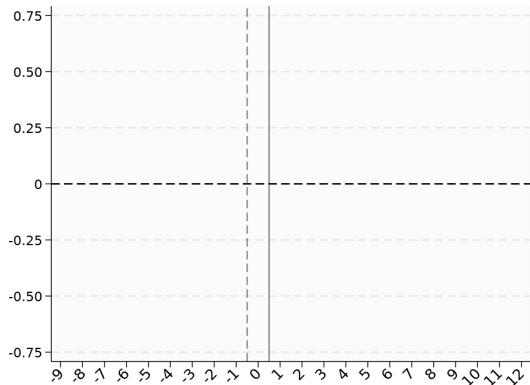
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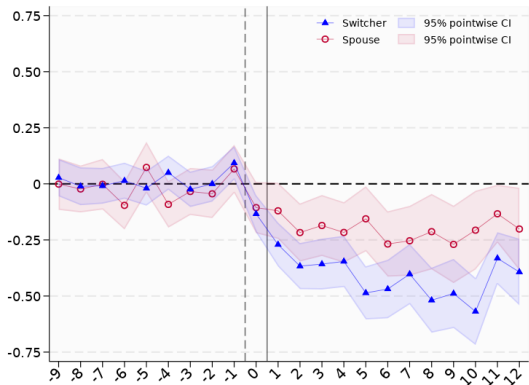
Services from lawyers, accountants and tax advisors, architects, and engineers.

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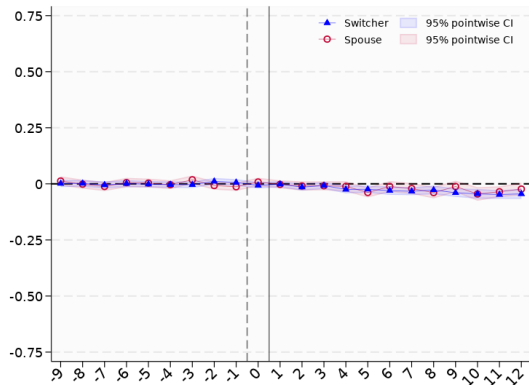
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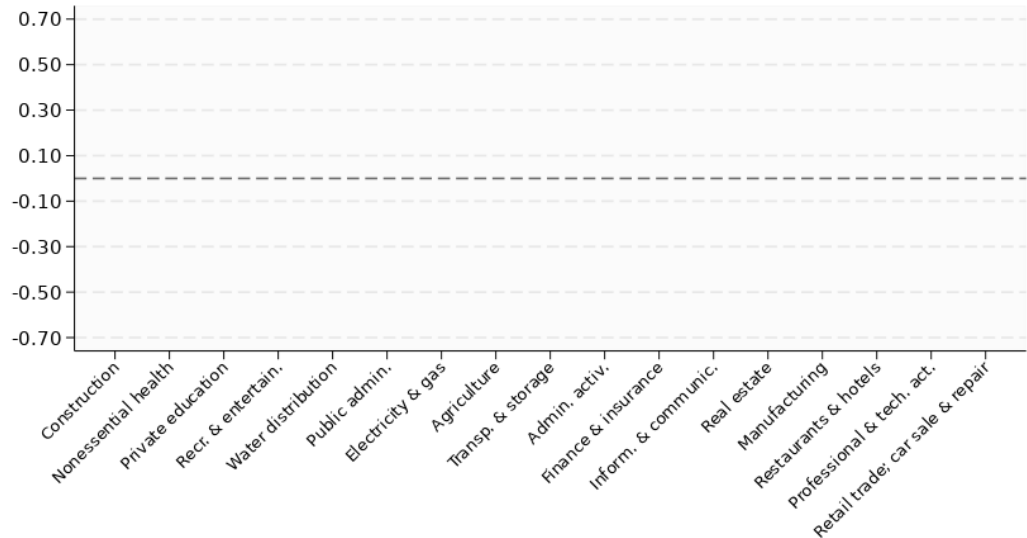


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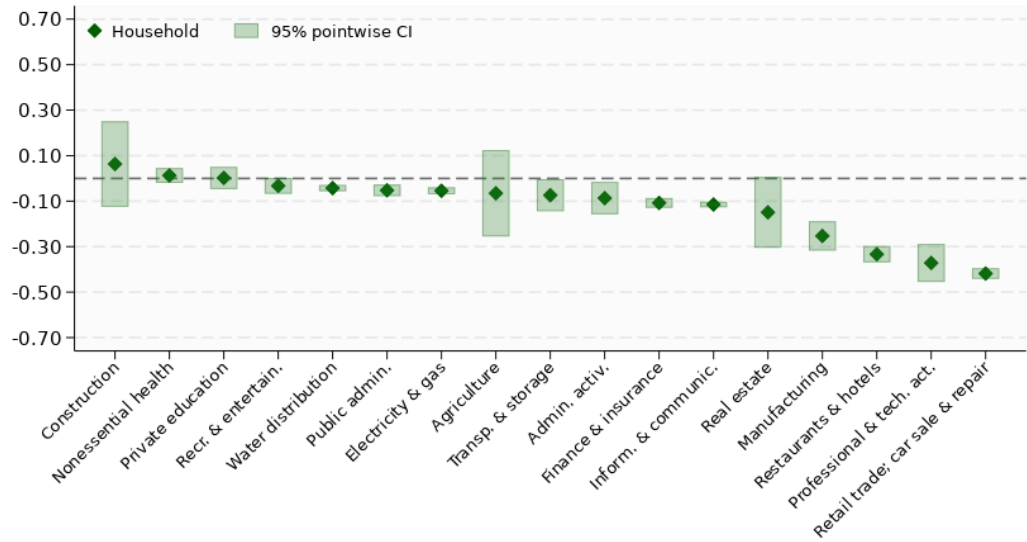
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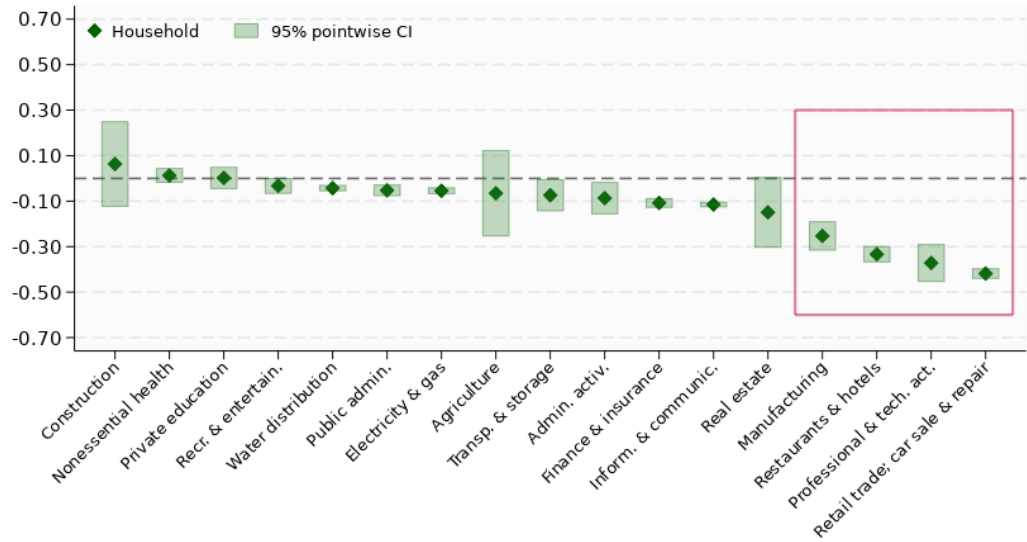
AVERAGE EFFECTS ON ALL EXPENDITURE CATEGORIES — HOUSEHOLD



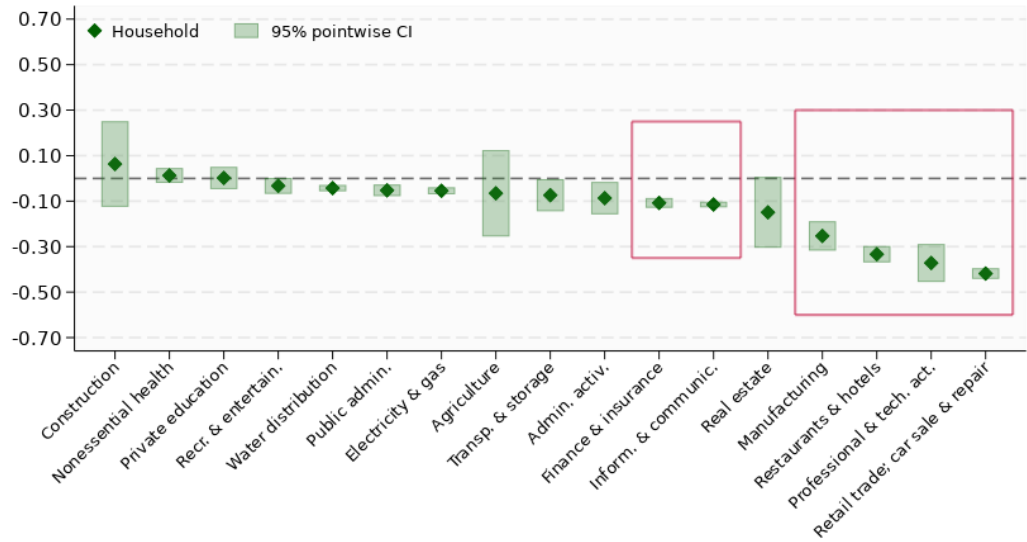
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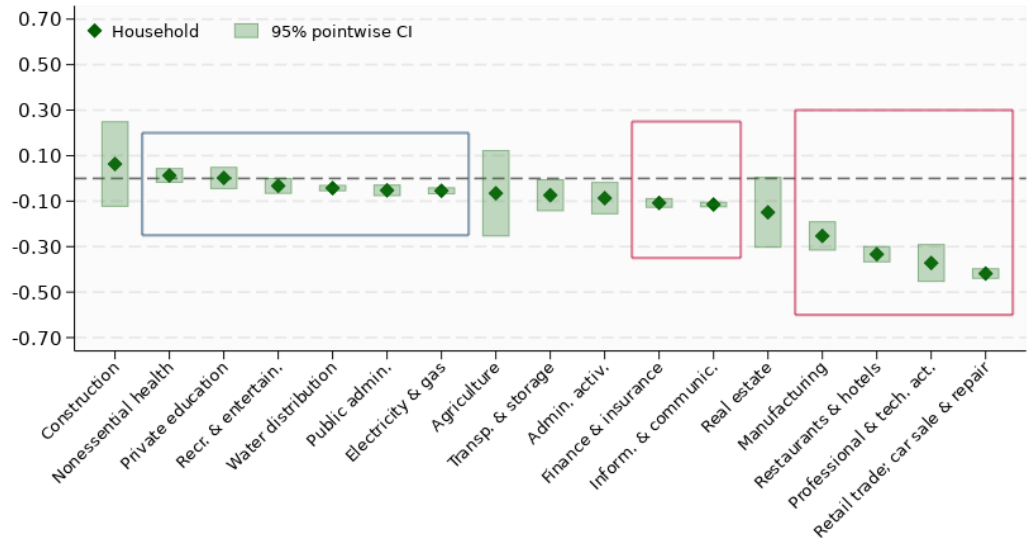
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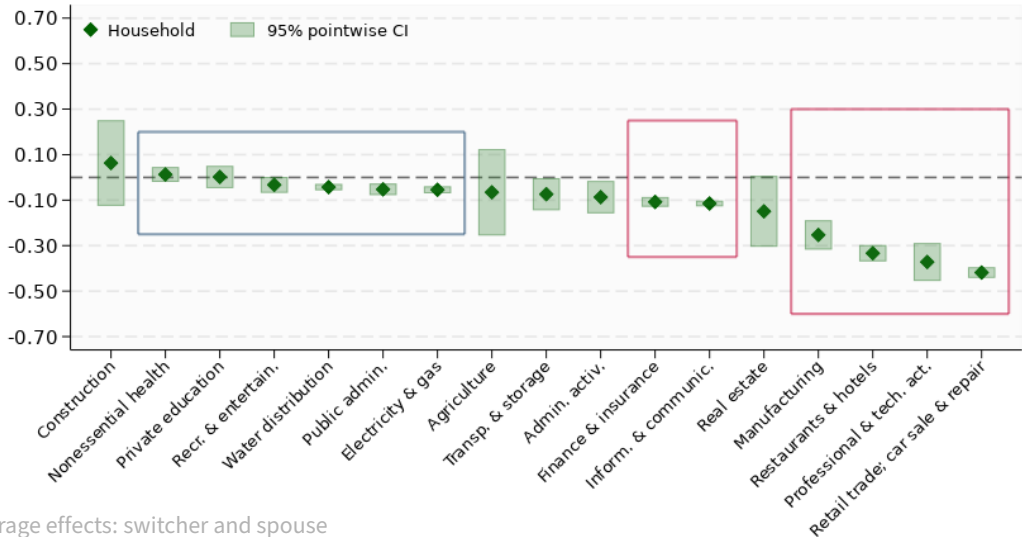
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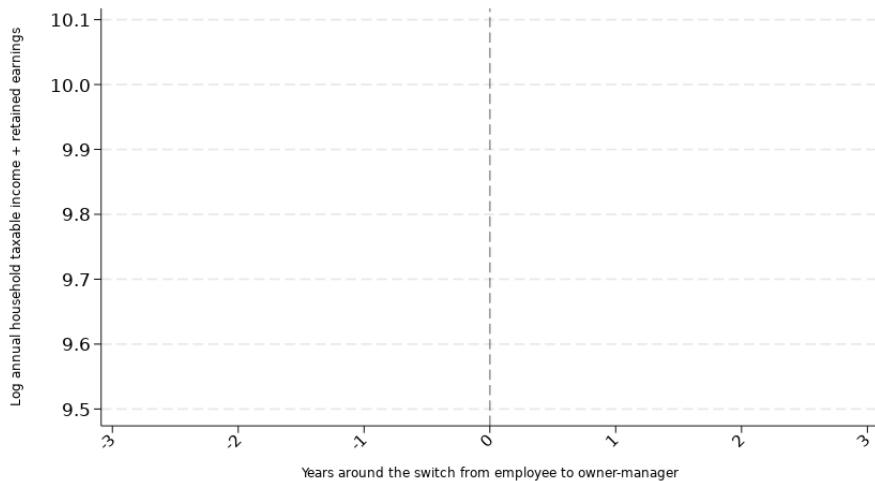


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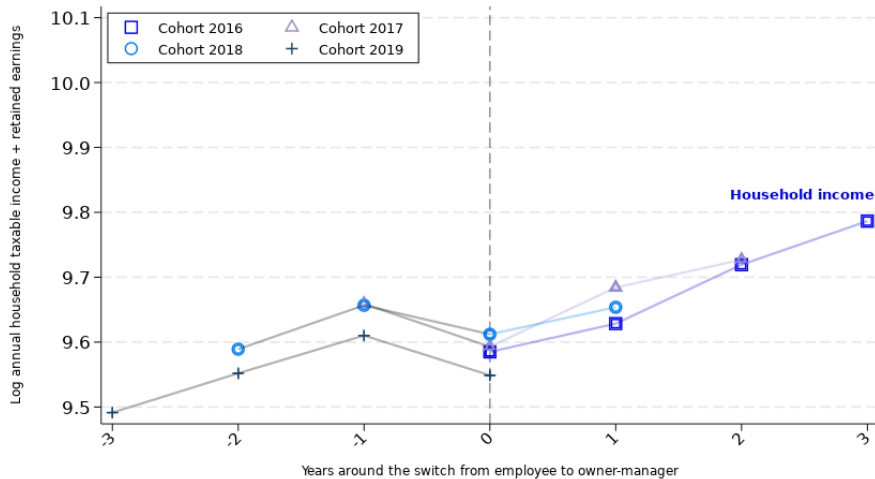


► Average effects: switcher and spouse

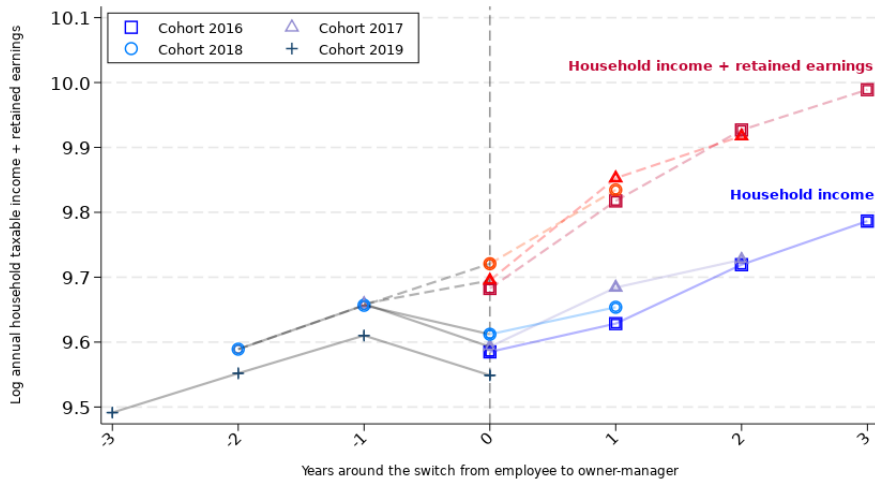
HOW INCOME EVOLVES AROUND THE SWITCH?



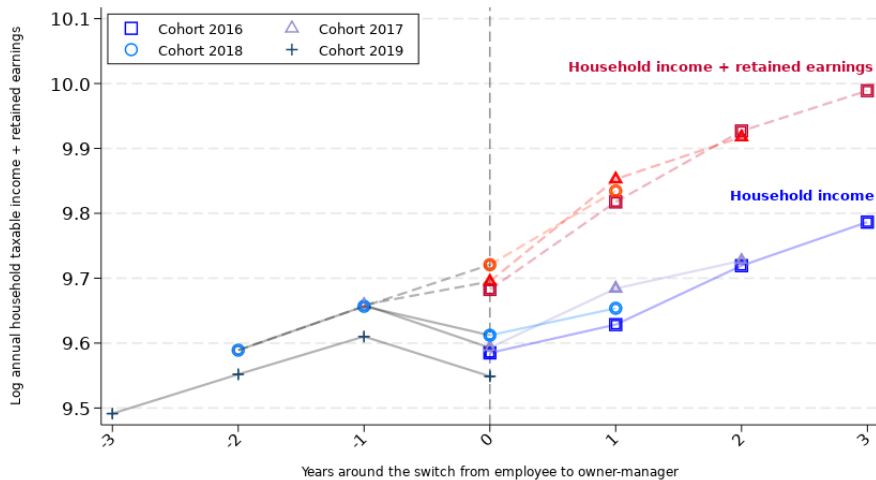
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HOW WIDESPREAD IS CONSUMPTION THROUGH THE FIRM?

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- Significant declines in household consumption expenditures after individuals become business managers.
- Income shock is ruled-out: only expenditures that lie on the business-consumption borderline adjust while hard-to-shift expenditures do not react to the switch.
- But... *Is this of major economic importance?*
- To understand whether consumption through the firm is limited to “poor” business managers or is instead a widespread phenomenon, I estimate the *effects across the income distribution*.

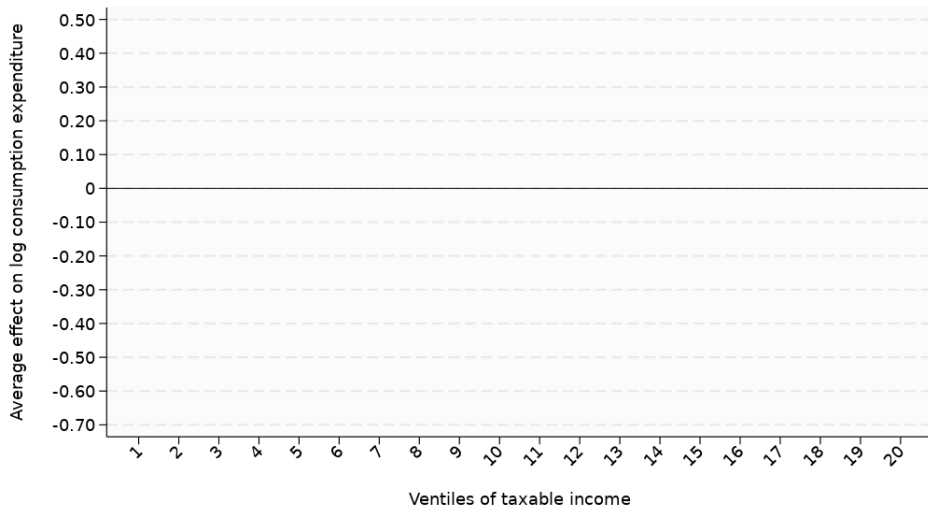
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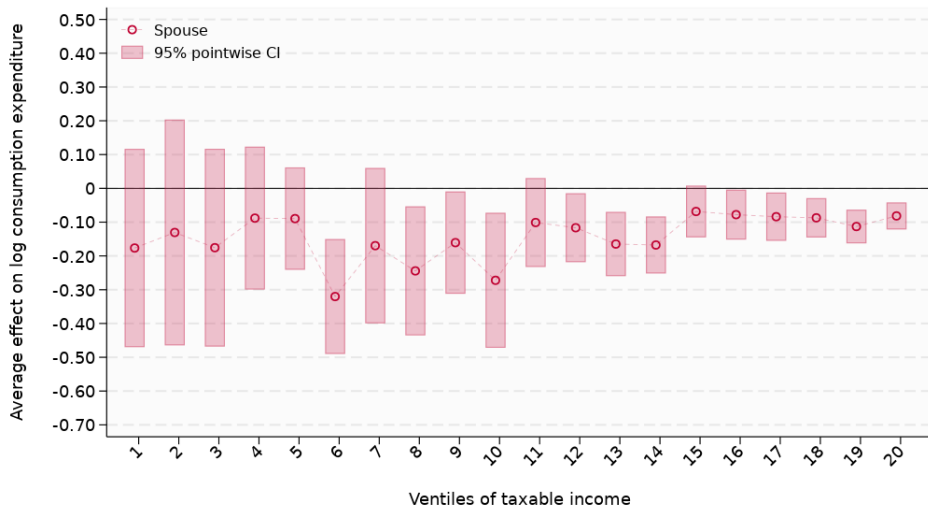
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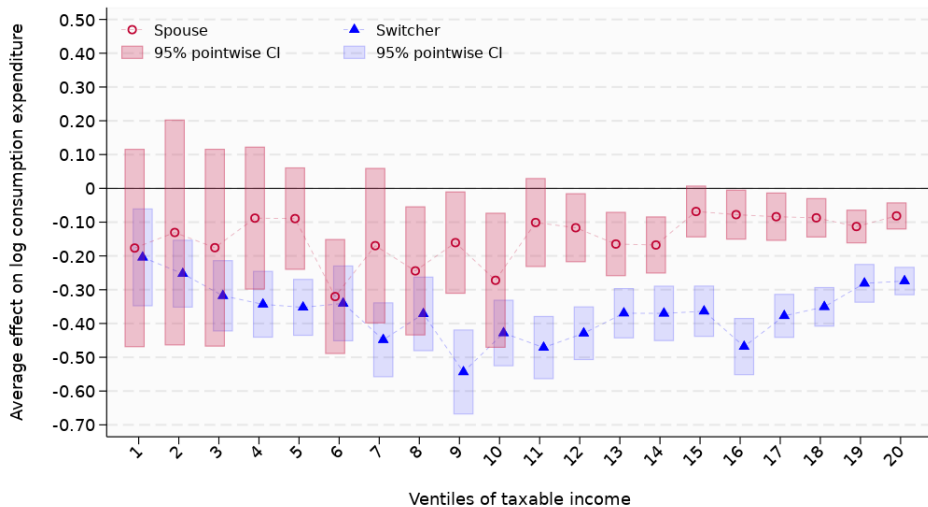
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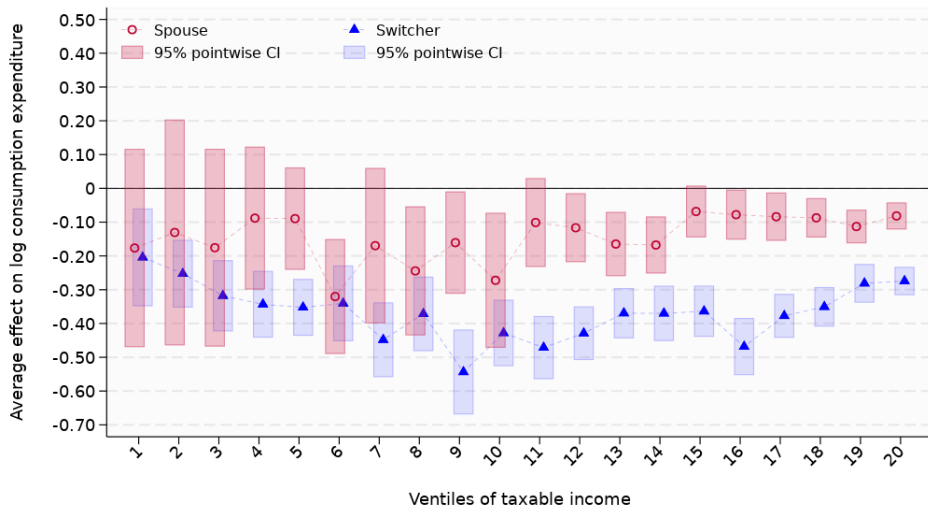
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▸ By decile ▸ By percentile

HETEROGENEITY

- Effects by **firm size** ([▸ here](#))
- Effects by **ownership status** ([▸ here](#))
- Effects by **industry** ([▸ here](#))

Additional descriptives on the population of business managers:

- Position in the income distribution ([▸ here](#))
- Distribution by firm size ([▸ here](#))
- Distribution by industry ([▸ here](#))

BUSINESS EXPENDITURES AND LIFE EVENTS

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- Looking at firm's expenditures it is *very hard to distinguish the pure business demand from the goods and services purchased solely for their consumption value.*
- How personal consumption motives affect the pattern of business expenditures? I estimate how monthly business expenditures react to life events of the business owner-manager with the following event study:

$$F_{it} = \sum_{k \in \{-5+, \dots, -1, 0, 1, \dots, 5+\}} \beta_k \mathbf{1}(t = k) + \theta_i + \lambda_t + \varepsilon_{it} \quad (2)$$

- Specifically, I estimate how monthly business expenditures on hotels and restaurants evolves around the birthday month of the owner-manager and the spouse.

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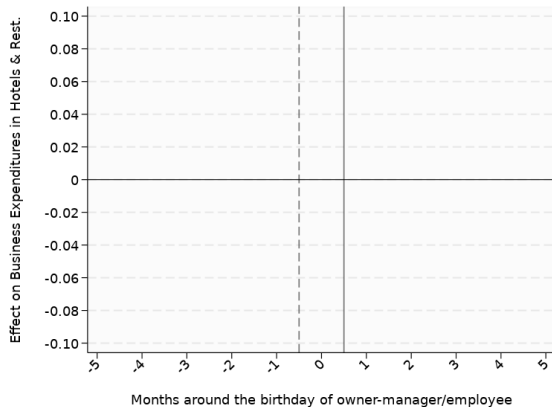
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▸ Raw averages (Owner-managers) ▸ Raw averages (Employees)

MONTHLY BUSINESS EXPENDITURES IN HOTELS & RESTAURANTS

Birth month of a randomly selected employee



Birth month of the employee's spouse

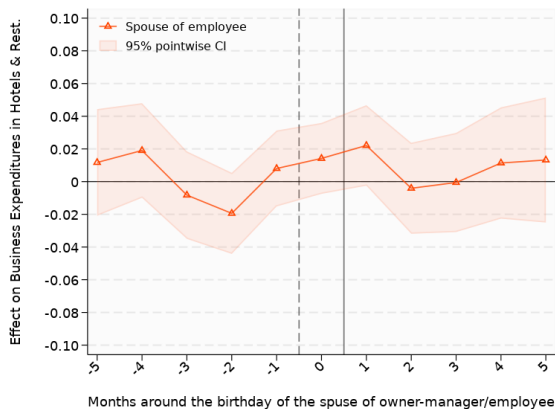


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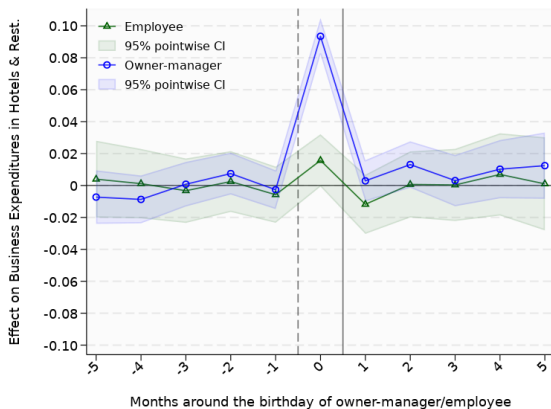


Birth month of the employee's spouse



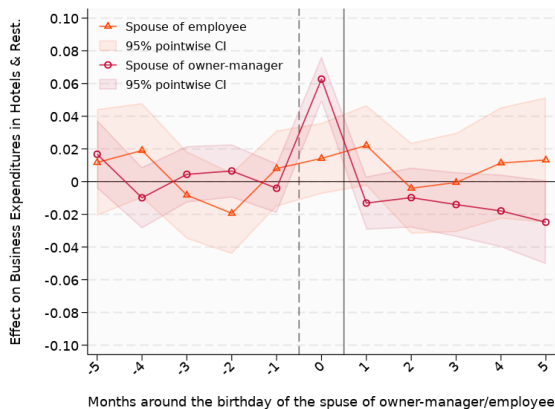
MONTHLY BUSINESS EXPENDITURES IN HOTELS & RESTAURANTS

Birth month of the owner-manager



► All business expenditures (owner-managers)

Birth month of the owner-manager's spouse



► All business expenditures (spouses)

AGGREGATE IMPLICATIONS

BASELINE HOUSEHOLD CONSUMPTION

	Million EUR	% of GDP		
Household expenditure (5.3 million households)	53,744	25.07	–	–
Owner-managers' household expenditure (287.9 thousand households)	6,119	2.85	–	–

ADJUSTING HOUSEHOLD CONSUMPTION

	$\hat{\delta} = 0.3123$		$\delta = \hat{\delta}_p$	
	Million EUR	% of GDP	Million EUR	% of GDP
$\Delta\text{Cons.} = \bar{c}/(1 - \hat{\delta}) - \bar{c}$	2,778	1.30	2,672	1.25
	(2,577 2,989)	(1.20 1.39)	(1,238 5,598)	(0.58 2.61)

GOVERNMENT REVENUE LOSS

	$\hat{\delta} = 0.3123$		$\delta = \hat{\delta}_p$	
	Million EUR	% of GDP	Million EUR	% of GDP
Aggregate loss in PIT				
Dividends: $\tau = 28\%$	1,080	0.50	1,039	0.48
$\tau/(1 - \tau) \cdot \Delta\text{Cons.}$	(1,002 1,162)	(0.47 0.54)	(482 2,177)	(0.22 1.02)

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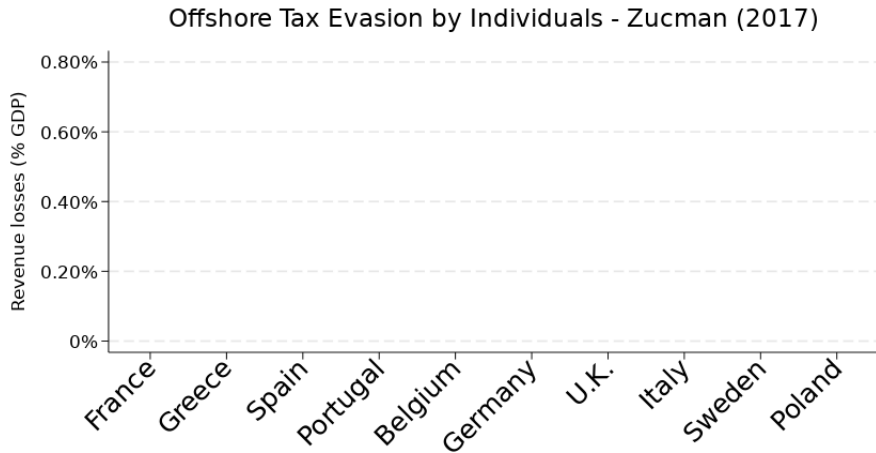
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Aggregate loss in PIT and VAT								
Dividends: $\tau = 28\%$; VAT: $\gamma = 23\%$	2,233		1.04		2,148		1.00	
$\left[\frac{1}{(1-\gamma) \cdot (1-\tau)} - 1 \right] \cdot \Delta\text{Cons.}$	(2,071	2,402)	(0.97	1.12)	(995	4,499)	(0.46	2.10)

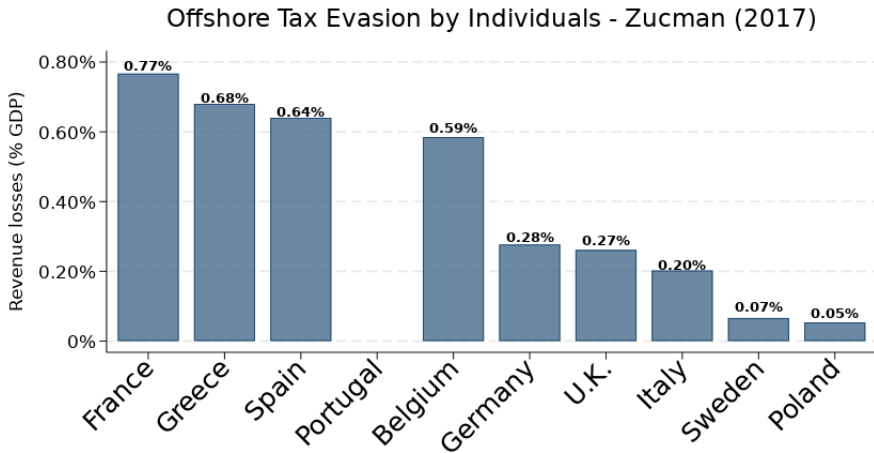
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	Million EUR		% of GDP		Million EUR		% of GDP	
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Dividends: $\tau = 28\%$	1,080		0.50		1,039		0.48	
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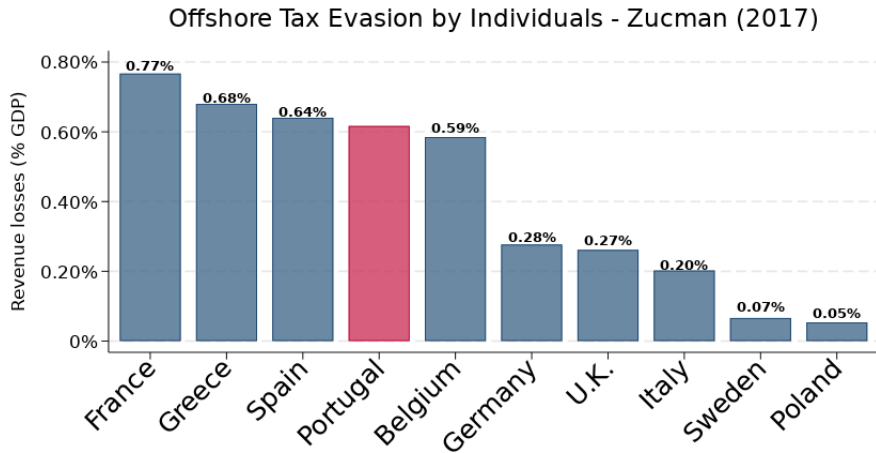
THE SCALE OF TAX EVASION IN PERSPECTIVE



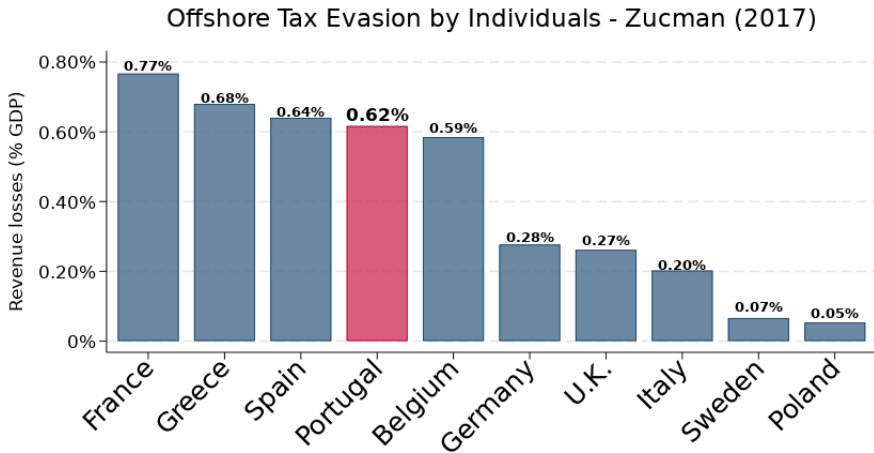
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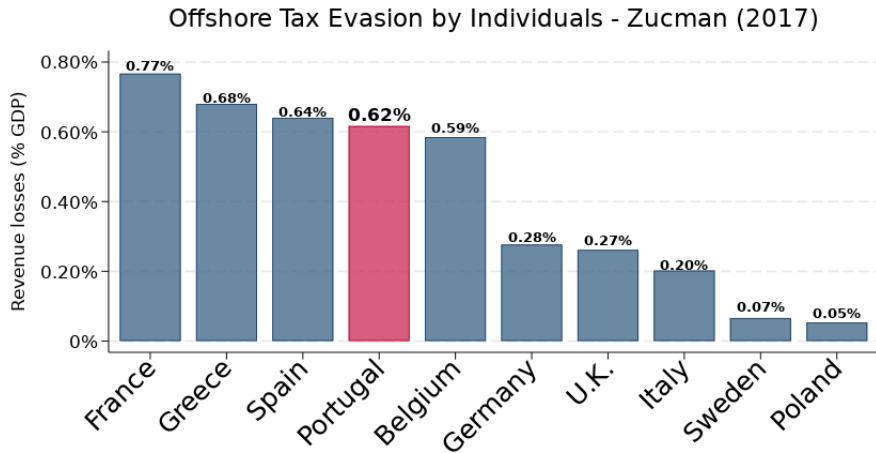
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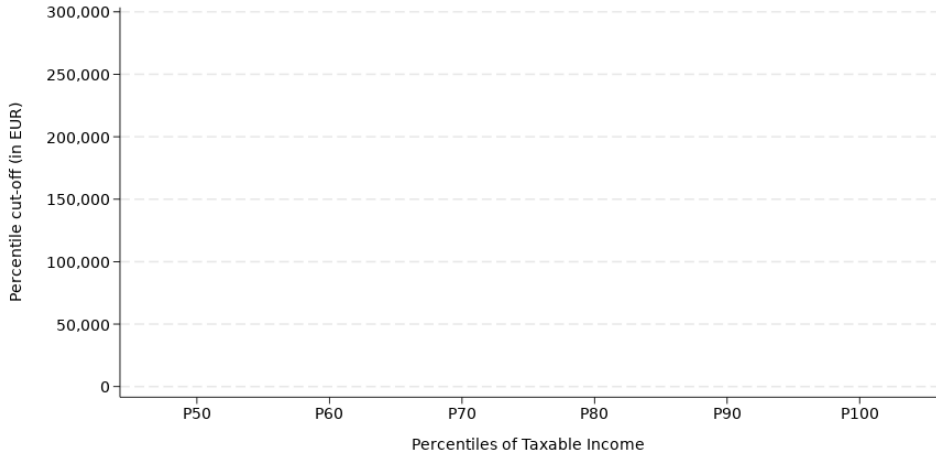


SOURCE: [Zucman \(2017\)](#) available on the EU Tax Observatory website [\[link\]](#)

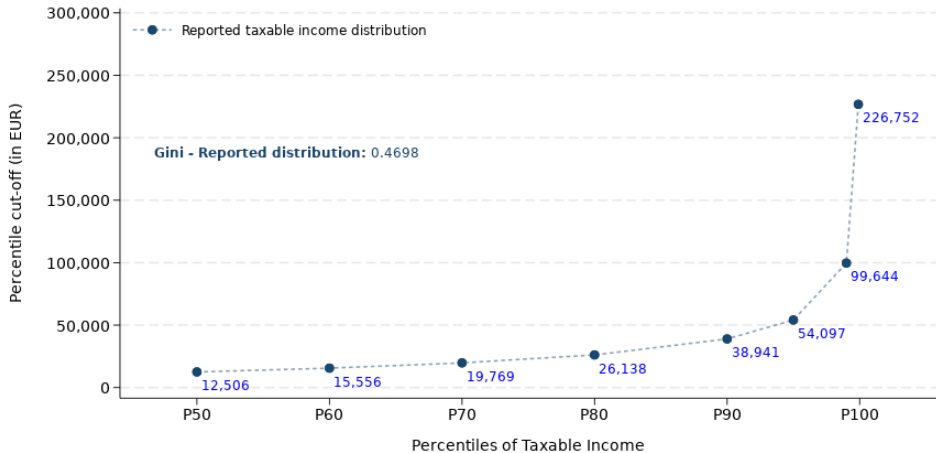
ADJUSTING HOUSEHOLD INCOME

	$\hat{\delta} = 0.3123$		$\delta = \hat{\delta}_p$	
	Million EUR	% of GDP	Million EUR	% of GDP
$\frac{1}{(1-\gamma) \cdot (1-\tau)} \cdot \Delta\text{Cons.}$	5,011	2.34	4,820	2.25
	(4,648 5,391)	(2.17 2.51)	(2,233 10,097)	(1.04 4.71)

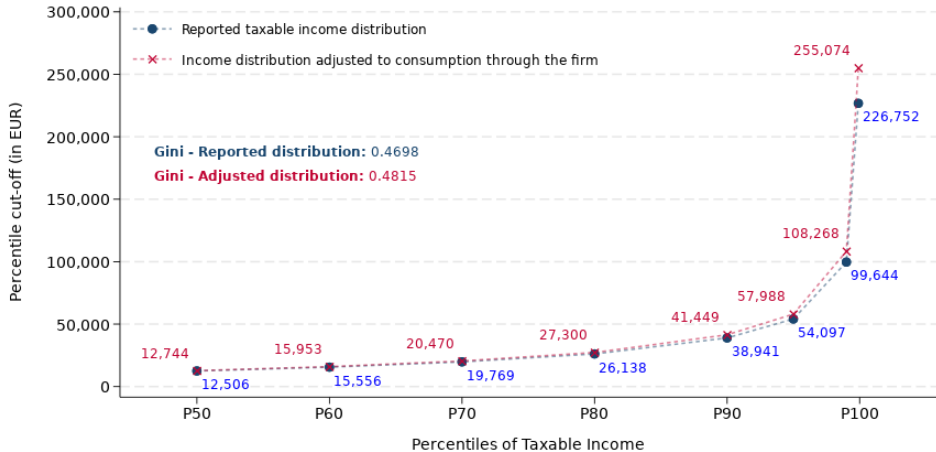
DISTRIBUTIONAL IMPLICATIONS: REPORTED VS. ADJUSTED DISTRIBUTIONS



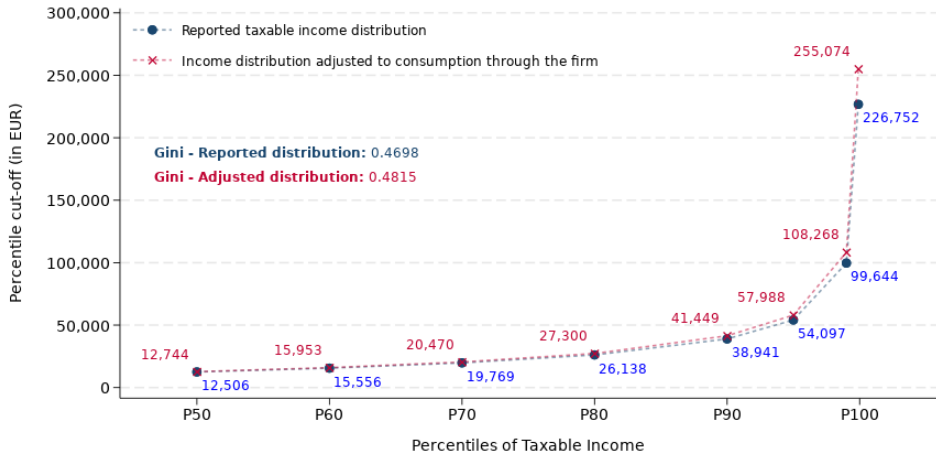
DISTRIBUTIONAL IMPLICATIONS: REPORTED VS. ADJUSTED DISTRIBUTIONS



DISTRIBUTIONAL IMPLICATIONS: REPORTED VS. ADJUSTED DISTRIBUTIONS



DISTRIBUTIONAL IMPLICATIONS: REPORTED VS. ADJUSTED DISTRIBUTIONS



MAIN TAKEAWAYS

- Business managers shift approximately 36% of their personal expenditures to the firm and 31% of their combined household expenditures. The shift is driven by expenditures on the border between business and consumption, while hard-to-shift expenditures do not react.
- Scope for consumption through the firm is greater among *small closely held firms*.
- The pattern of business expenditures is affected by personal consumption motives: business expenditures in hotels and restaurants increase 9.8% in the birthday month of the owner-manager and 6.1% in the birthday month of the owner-manager's spouse.
- Government revenue loss in PIT and VAT due to consumption through the firm amounts to **1% of the GDP**. Reallocating to reported income the share of personal consumption hidden within the firm plus the tax savings increases the Gini coefficient by one percentage point.

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Annette Alstadsæter, Wojciech Kopczuk, and Kjetil Telle. Are Closely Held Firms Tax Shelters? *Tax Policy and the Economy*, 28(1):1–32, 2014.

Kirill Borusyak, Xavier Jaravel, and Jann Spiess. Revisiting event study designs: Robust and efficient estimation. 2021.

Brantly Callaway and Pedro H C Sant’Anna. Difference-in-differences with multiple time periods. *Journal of Econometrics*, 2020.

Charles T Clotfelter. Tax-induced distortions and the business-pleasure borderline: the case of travel and entertainment. *The American Economic Review*, 73(5):1053–1065, 1983.

Clément De Chaisemartin and Xavier D’Haultfoeuille. Two-way fixed effects estimators with heterogeneous treatment effects. *American Economic Review*, 110(9):2964–2996, 2020.

Wojciech Kopczuk and Eric Zwick. Business incomes at the top. *Journal of Economic Perspectives*, 34(4):27–51, 2020. ISSN 19447965. doi: 10.1257/JEP.34.4.27.

Helen Miller, Thomas Pope, and Kate Smith. Intertemporal income shifting and the taxation of business owner-managers. *The Review of Economics and Statistics*, pages 1–45, 2020.

Matt Smith, Danny Yagan, Owen Zidar, and Eric Zwick. The Rise of Pass-Throughs and the Decline of the Labor Share. *American Economic Review* (forthcoming), 2021.

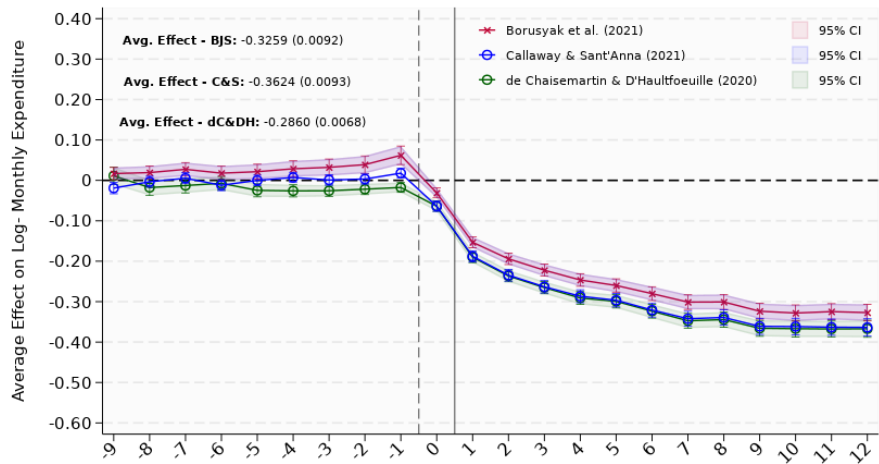
Gabriel Zucman. *La richesse cachée des nations. Enquête sur les paradis fiscaux*. Le Seuil, 2017.

APPENDIX TO

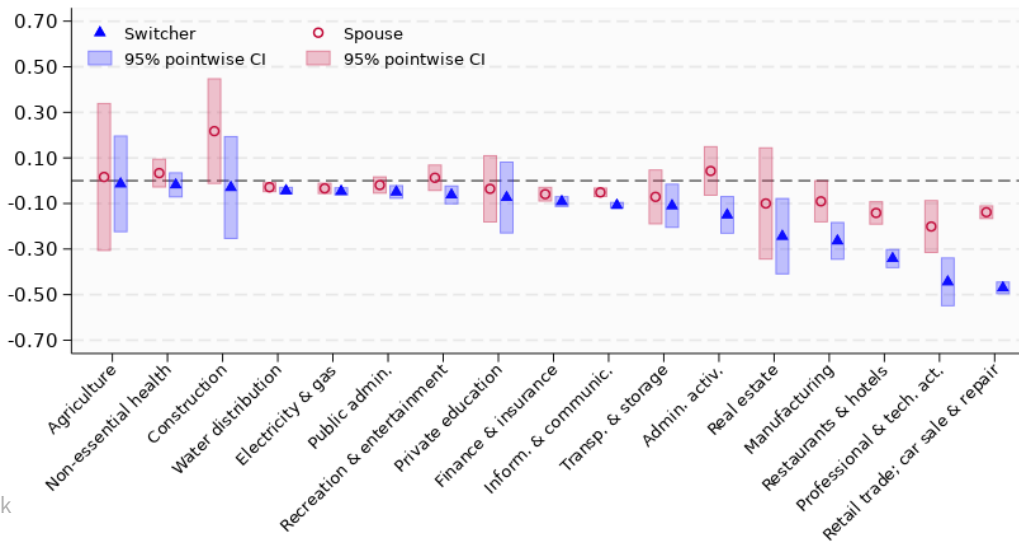
THE FIRM AS TAX SHELTER

MICRO EVIDENCE AND AGGREGATE IMPLICATIONS OF CONSUMPTION THROUGH THE FIRM

ALTERNATIVE ESTIMATORS

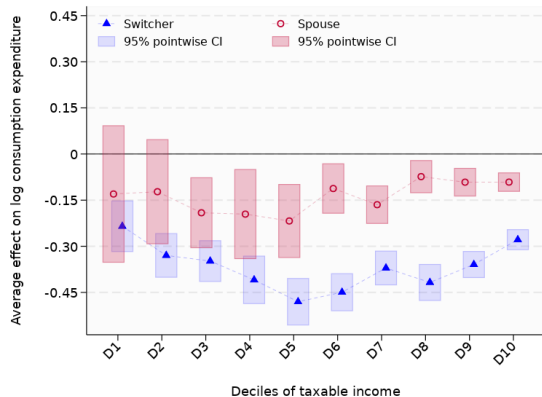


AVERAGE EFFECTS ON ALL EXPENDITURE CATEGORIES — SWITCHER & SPOUSE

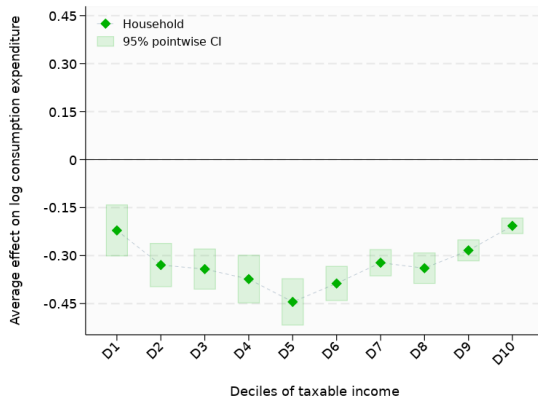


EFFECTS BY DECILE OF HOUSEHOLD TAXABLE INCOME

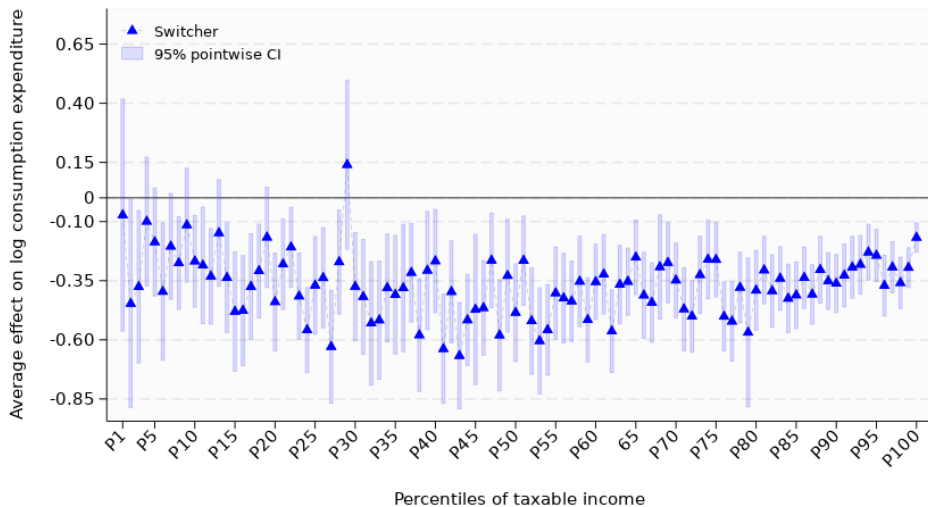
Switcher & Spouse



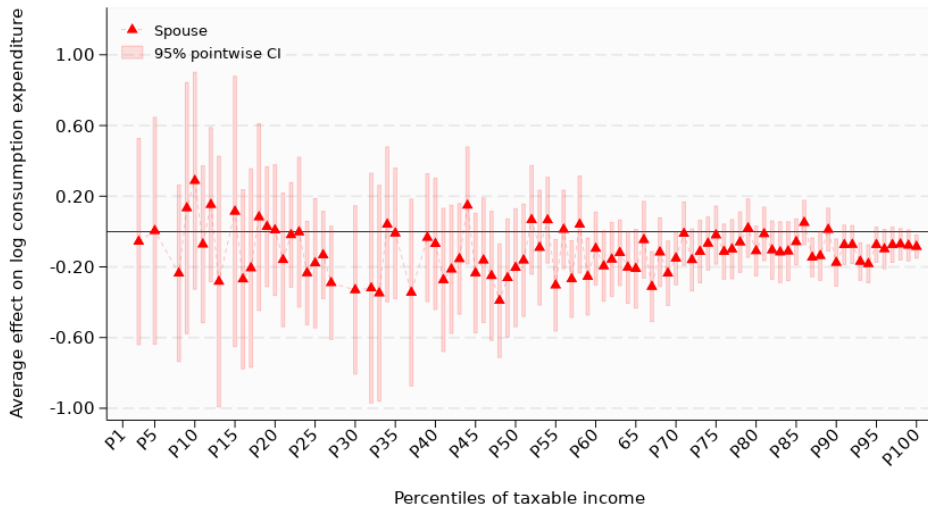
Household



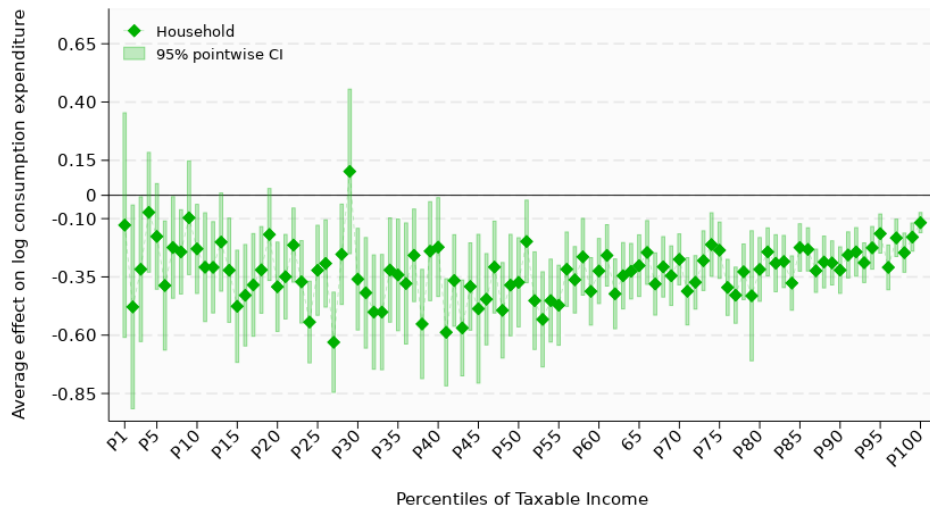
EFFECTS BY PERCENTILE OF TAXABLE INCOME — SWITCHER



EFFECTS BY PERCENTILE OF TAXABLE INCOME — SPOUSE

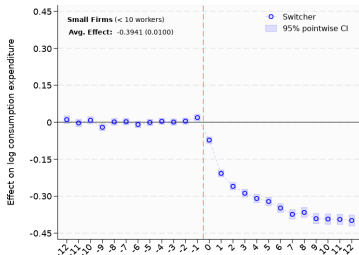


EFFECTS BY PERCENTILE OF TAXABLE INCOME — HOUSEHOLD

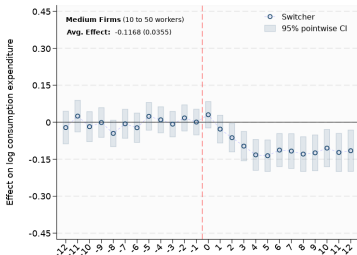


EFFECTS BY FIRM SIZE: SMALL, MEDIUM AND LARGE FIRMS — SWITCHER

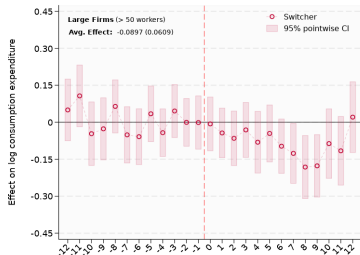
Small firms (<10 workers)



Med firms (10 to 50 workers)

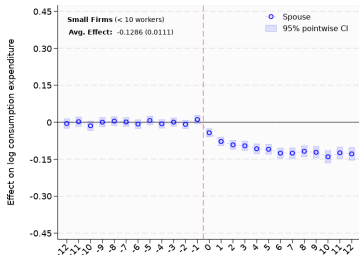


Large firms (> 50 workers)

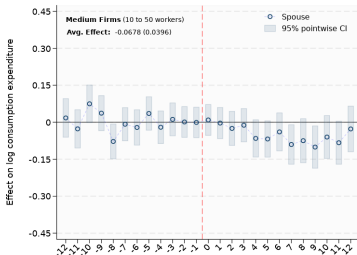


EFFECTS BY FIRM SIZE: SMALL, MEDIUM AND LARGE FIRMS — SPOUSE

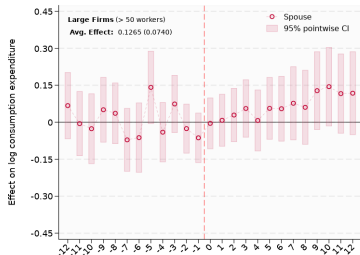
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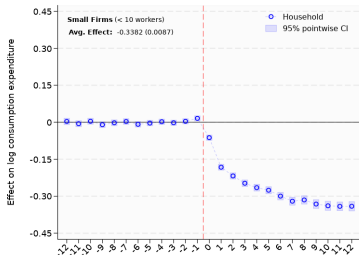


Large firms (> 50 workers)

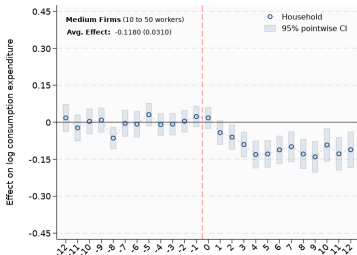


EFFECTS BY FIRM SIZE: SMALL, MEDIUM AND LARGE FIRMS — **HOUSEHOLD**

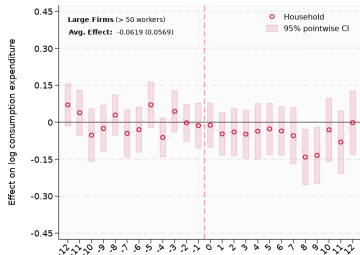
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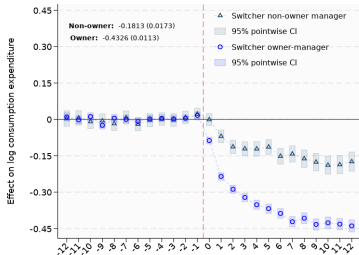


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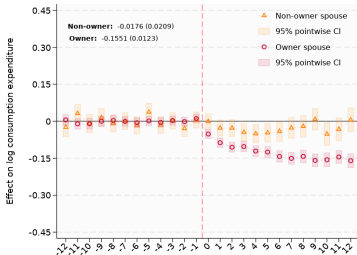


EFFECTS BY FIRM OWNERSHIP: OWNER VS. NONOWNER BUSINESS MANAGER

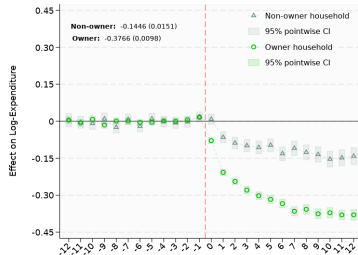
Switcher



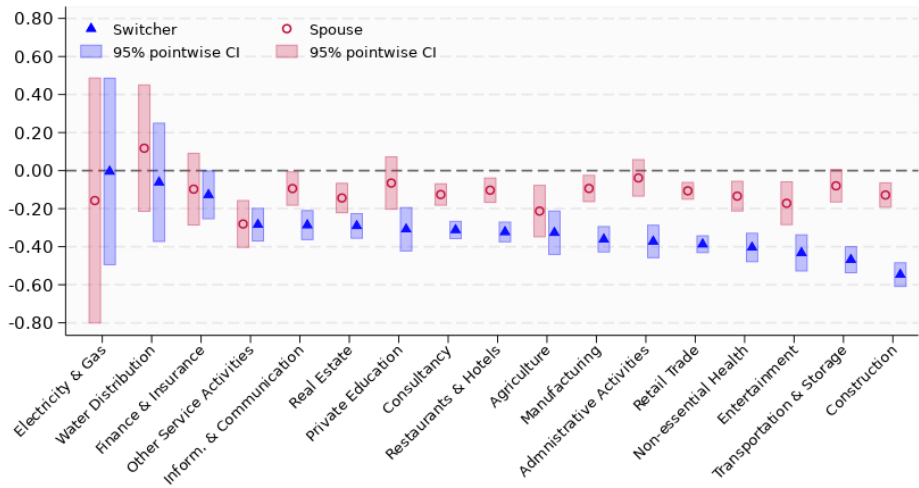
Spouse



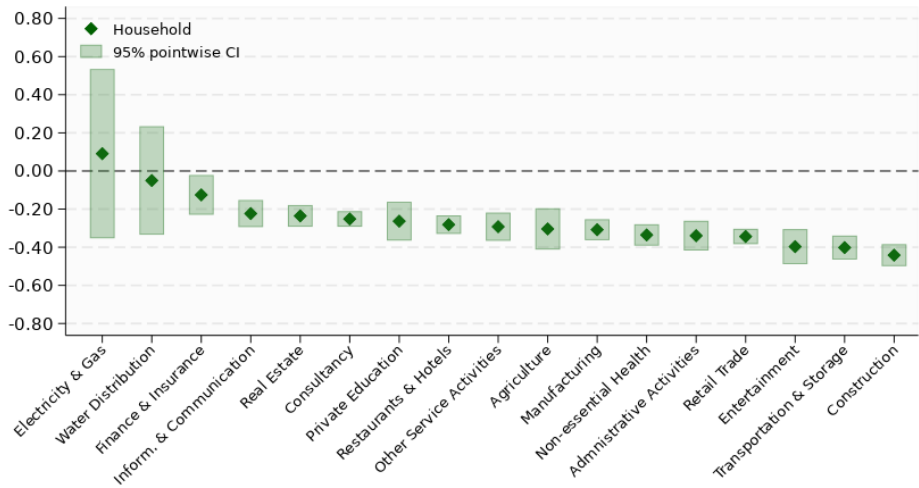
Household



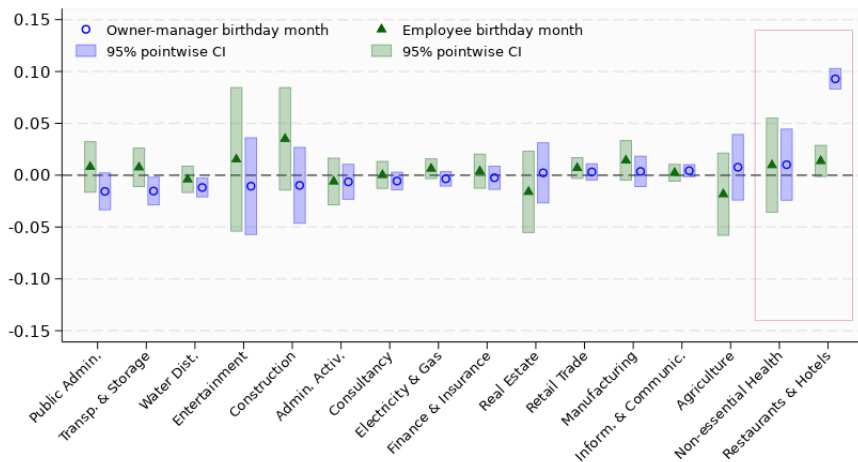
AVERAGE EFFECTS BY INDUSTRY — SWITCHER AND SPOUSE



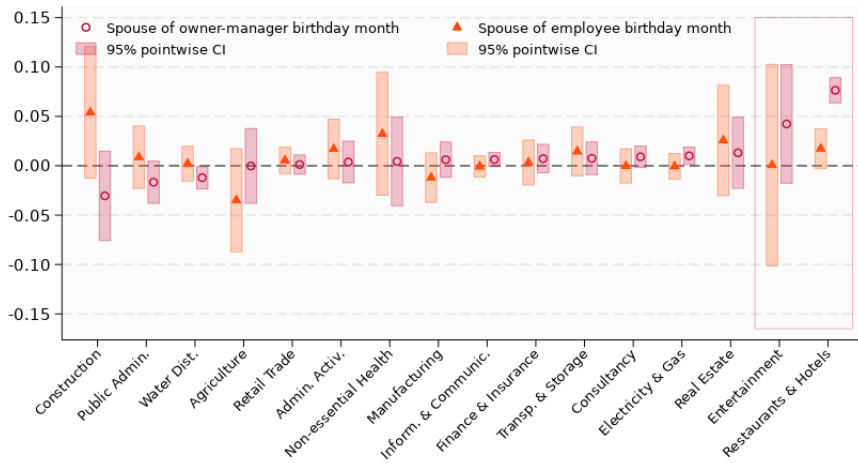
AVERAGE EFFECTS BY INDUSTRY — HOUSEHOLD



EFFECTS ON BUSINESS EXPENDITURES AT BIRTHDAY MONTH — OWNER-MANAGERS VS. EMPLOYEES



EFFECTS ON BUSINESS EXPENDITURES AT BIRTHDAY MONTH — SPOUSES



IMPLICATIONS FOR TOP INCOME SHARES

	2018		2019	
	Reported	Adjusted	Reported	Adjusted
Bottom 50%	19.10	18.45	19.32	18.67
50%–90%	45.23	44.82	45.32	44.94
Top 10%	35.68	36.73	35.37	36.39
Top 5%	23.56	24.41	23.31	24.13
Top 1%	8.59	9.09	8.50	8.96
Top 0.1%	2.14	2.37	2.17	2.37

DESCRIPTIVES FOR THE PANEL OF MONTHLY EXPENDITURES OF SWITCHERS

	Cohort 2016	Cohort 2017	Cohort 2018	Cohort 2019	Panel 2016–19
Age	39.80	40.02	39.81	39.72	39.84
Male	0.66	0.68	0.68	0.69	0.68
Married	0.57	0.56	0.53	0.50	0.54
Household size	2.47	2.41	2.33	2.27	2.37
Mean	25,659	26,859	26,370	25,659	25,587
P10	4,770	4,934	5,040	4,770	4,899
P50	14,981	14,999	14,686	14,981	14,625
P90	53,067	53,713	53,794	53,067	52,062
Top 1%	175,148	192,713	180,623	175,148	173,726

DESCRIPTIVES FOR THE PANEL OF MONTHLY EXPENDITURES OF SWITCHERS

	<u>Role as employee</u>	<u>Role as manager</u>
Non-existing firm	–	0.75
Time operating	16.22	2.12
Same firm	–	0.05
Limited liability company	0.62	0.73
Single member company	0.13	0.20
Non-profit organization	0.03	0.04
Join-stock company	0.17	0.02
Others	0.05	0.01

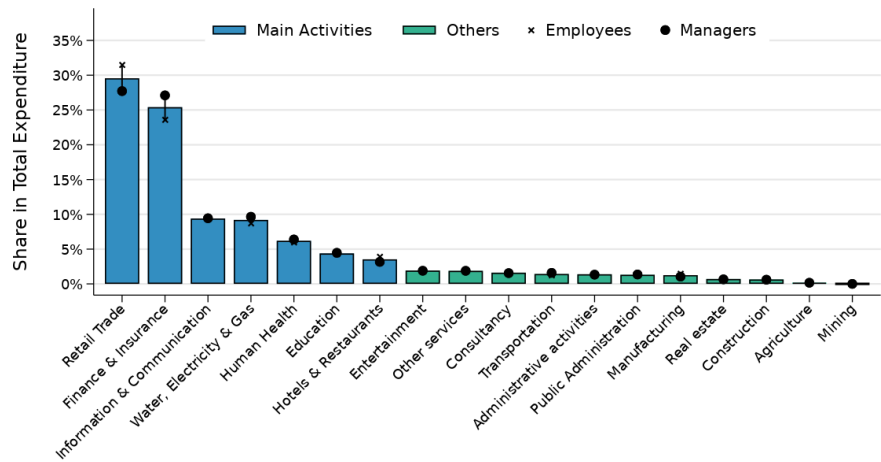
DESCRIPTIVES FOR THE PANEL OF MONTHLY EXPENDITURES OF SWITCHERS

	Role as employee	Role as manager
Average Number of Workers	113.95	7.31
< 10 Workers	0.58	0.96
≥ 10 and < 50 Workers	0.23	0.03
≥ 50 Workers	0.18	0.01
Mean of Sales	13,762.39	659.01
Mean of Assets	19,814.19	1,766.86
Mean of Profits	392.19	42.13

DESCRIPTIVES FOR THE PANEL OF MONTHLY EXPENDITURES OF SWITCHERS

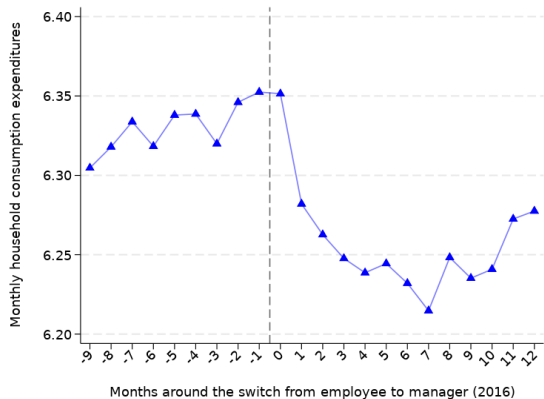
	<u>Role as employee</u>	<u>Role as manager</u>
Retail Trade	0.21	0.19
Hotels & Restaurants	0.11	0.13
Construction	0.11	0.10
Manufacturing	0.13	0.08
Professional & Tech. Act.	0.08	0.09
Transportation	0.05	0.07
Human Health	0.05	0.05
Administrative Activities	0.06	0.04
Other Service Activities	0.03	0.05
Real Estate	0.03	0.05
Inform. & Communication	0.04	0.04
Entertainment	0.02	0.04
Other Sectors	0.08	0.06

HOUSEHOLD CONSUMPTION SHARES OF THE SWITCHERS

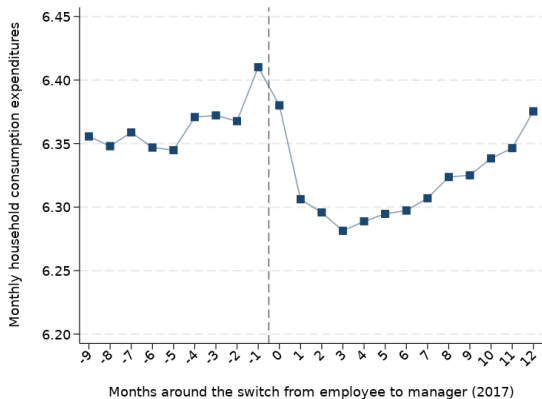


RAW EVENT: 2016 AND 2017 COHORTS

2016 Cohort

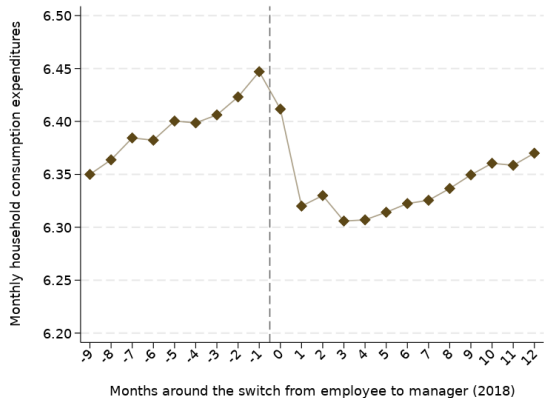


2017 Cohort

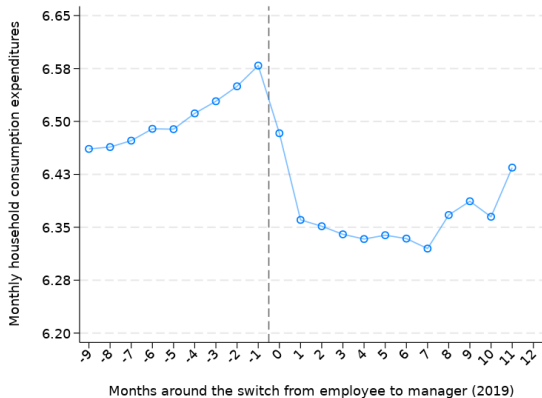


RAW EVENT: 2018 AND 2019 COHORTS

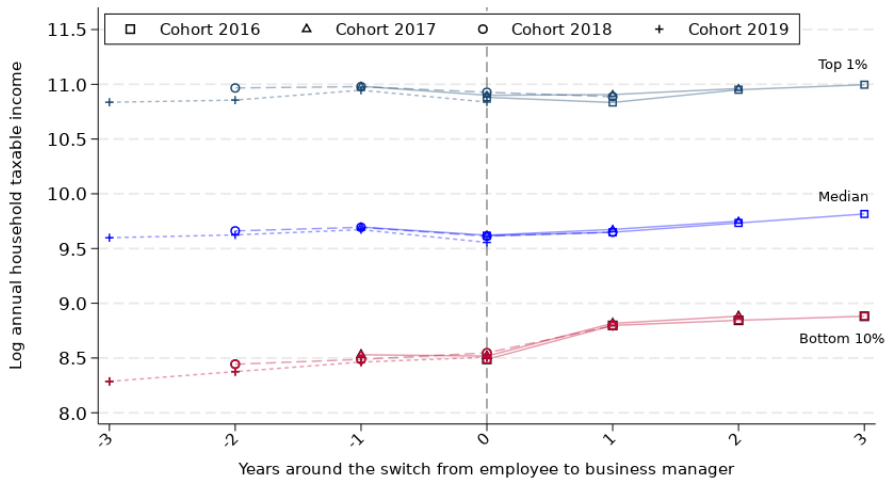
2018 Cohort



2019 Cohort

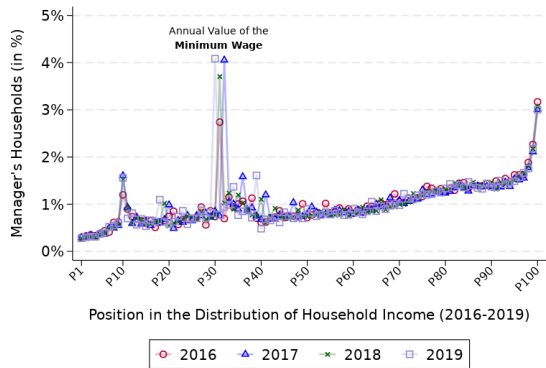


EVOLUTION OF THE TOP 1%, MEDIAN AND BOTTOM 10%

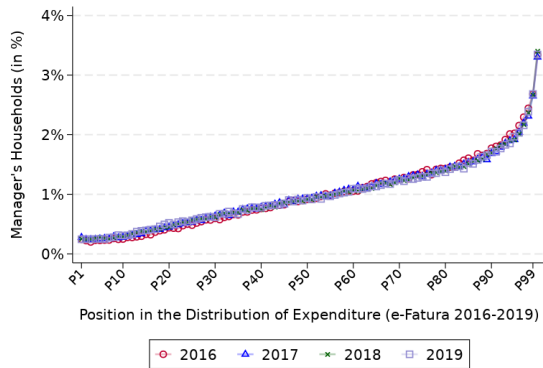


POSITION OF BUSINESS MANAGERS IN THE POPULATION'S DISTRIBUTION OF INCOME AND EXPENDITURE

Income distribution

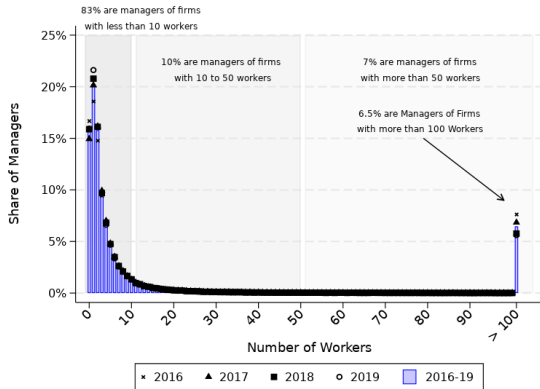


Expenditure distribution

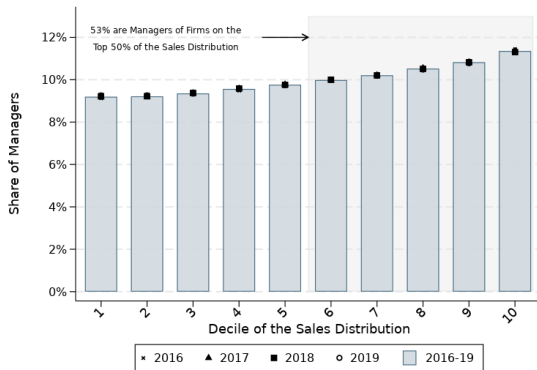


DISTRIBUTION OF THE POPULATION OF BUSINESS MANAGERS BY FIRM SIZE

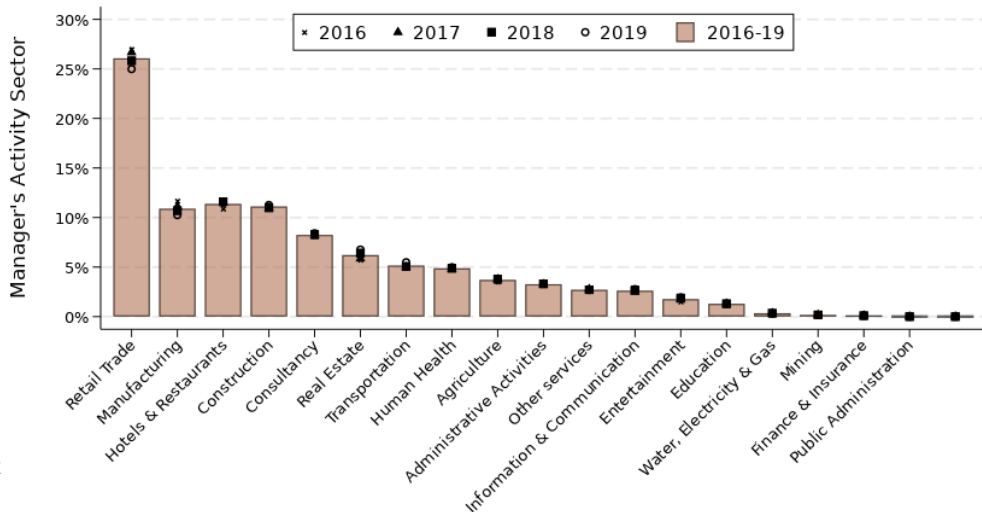
Number of workers



Volume of sales

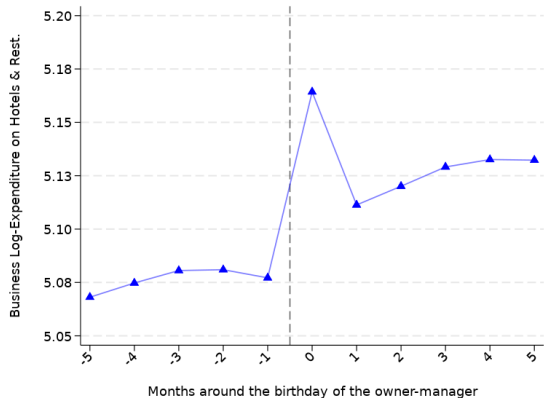


DISTRIBUTION OF THE POPULATION OF BUSINESS MANAGERS BY INDUSTRY

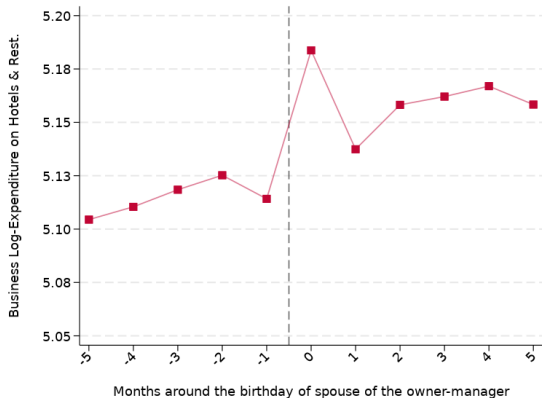


BUSINESS EXPENDITURES IN HOTELS & RESTAURANTS: OWNER-MANAGERS

Birth month of the owner-manager

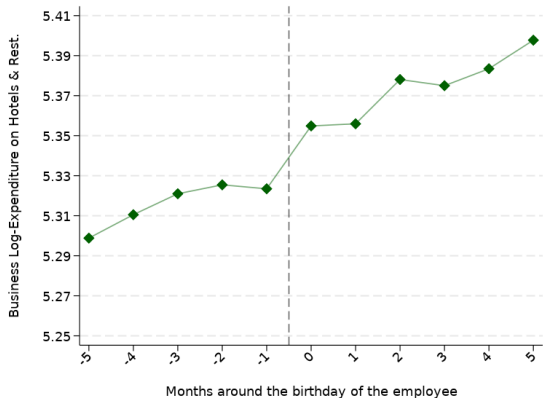


Birth month of the owner-manager's spouse

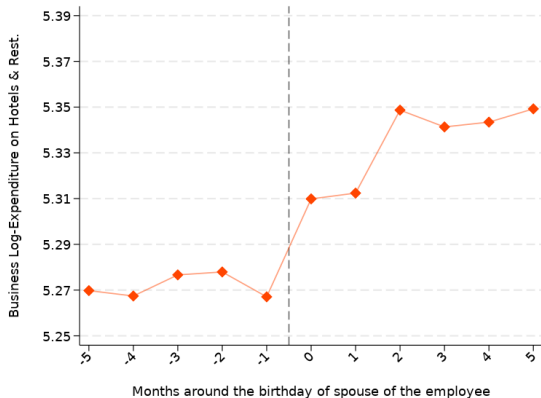


BUSINESS EXPENDITURES IN HOTELS & RESTAURANTS: EMPLOYEES

Birth month of the employee



Birth month of the employee's spouse



ANECDOTAL EVIDENCE COLLECTED FROM PRESS RECORDS

- **United States:** *New York Times*, *ABC News*
- **France:** *Libération* (in French)
- **Spain:** *The Guardian*
- **Portugal:** *Expresso* (in Portuguese)

