Insuring Unemployment Out of Your Own Pension

Causal Evidence from Mexico's *Retiro Parcial por Desempleo*

Esteban Degetau

Instituto Mexicano del Seguro Social, Barcelona School of Economics

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The prediction this paper tests

When a benefit is funded from the worker's own savings, the behavioural response should be muted: no risk pooling, no fiscal outlay, the worker internalises the cost. That is what individual accounts were designed to deliver (Feldstein and Altman 2007).

Mexico's *Retiro Parcial por Desempleo* is a clean test: displaced formal workers withdraw part of their own pension savings, and the only thing that changes is their own retirement wealth.

In the best of worlds, UI could even allow displaced workers to find better jobs that they otherwise could have (Acemoglu and Shimer 2000).

Four literatures meet here; none of them answers this

Pooled UI lengthens spells, universally (Katz and Meyer 1990; Schmieder et al. 2012); whether that buys a better job is contested (Nekoei and Weber 2017; Acemoglu and Shimer 2000). But the money is someone else's: insurance and transfer move together.

Individual accounts (UISA) were designed to separate them (Feldstein and Altman 2007): Chile's self-funded tranche shows no duration response (Hartley et al. 2011).

Where UI is unaffordable, the substitute is a lump sum. Brazil's severance lengthens formal spells, over half of it worked informally (Britto 2022; Gerard and Gonzaga 2021) — but that is the *employer's* money.

The RPD is the worker's own retirement wealth. Prior causal work uses survey data and eligibility alone (Velázquez Guadarrama 2023; Carreño Godínez 2025); one reads an increase in future wages as *better* matching. Here take-up is observed — and so is its projected price at retirement.

Setting

Mexico has no unemployment insurance

Severance is the *de jure* income substitute: 90 days of wages, owed by the employer. It is *de facto* close to unenforceable (Sadka et al. 2024):

- **Half** of dismissed workers report never receiving it, despite being entitled to
- Only **15%** of dismissed workers whose employers fail to pay severande file a claim
  - A majority of the remaining 85% views the process as either “useless” or “too expensive”
- **30%** of lawsuits are unresolved four years later
- Among workers who *won*, only **20%** collected the full award, while 54% of them failed to collect anything

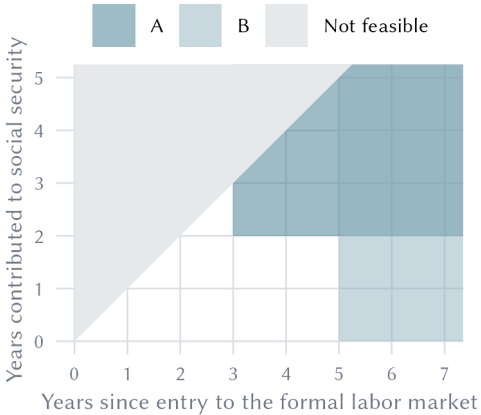
So the RPD is not one option among several. For most displaced formal workers it is the only income substitute that actually arrives.

What the RPD is

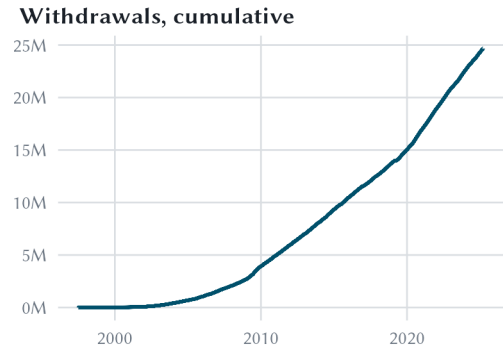
Withdraw part of your pension savings after **46 days** without a registered formal job.

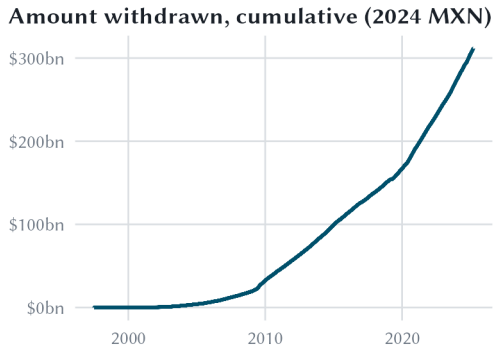
- **Scheme A** — 3 years since entry *and* 2 years of contributions. Pays the lesser of 10 months of minimum wage or one month of own wage.
- **Scheme B** — 5 years since entry, no contribution test. Pays the lesser of 3 monthly wages or 11.5% of the balance.

Usable once every 5 years. Under Art. 198 LSS the withdrawal also **discounts contribution weeks in the same proportion** as the balance.



The program is large, and its use is crisis-driven





24,598,838 withdrawals by 16,966,851 workers since 1997, totalling $305 bn. The steps are 2009 and 2020: rate of adoption increases when the labor market deteriorates.

aggregate cost ›

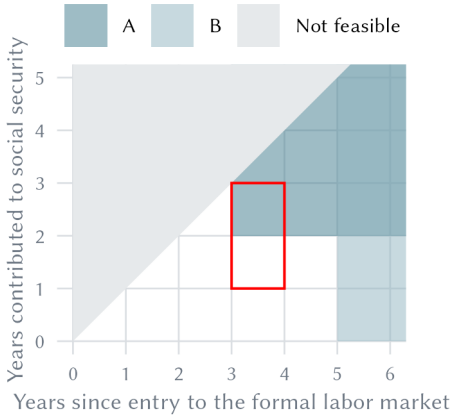
Data and sample

Two confidential IMSS sources linked by social-security number: the matched employer–employee panel (14.8 M workers, 406.8 M contracts) and the universe of RPD withdrawal records.

Analysis sample: **877,749** workers with exactly **one** non-employment spell of 46+ days *during their third year* in formal work. [covariates ›]

The withdrawal is small against the wage but large against the account — $7,691, about 0.86 months of the prior wage and 35.9% of the balance. [withdrawal ›]

Scope condition: these data observe *formal* employment and only formal employment.



Design

Fuzzy regression discontinuity

Eligibility jumps at two years of contributions; take-up does not jump all the way. So eligibility instruments for take-up.

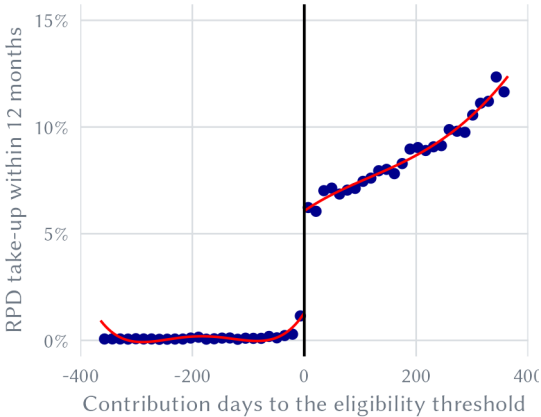
$$T_i = \alpha + \beta D_i + f(C_i - 2) + u_i, \qquad Y_i = \gamma + \tau \hat{T}_i + f(C_i - 2) + v_i$$

for $|C_i - 2| \leq h$, where $D_i = \mathbb{1}\{C_i \geq 2\}$.

τ is the local average treatment effect on **compliers** — workers who withdraw because the rule let them, and would not have otherwise.

Local linear, triangular kernel, MSE-optimal bandwidth (Calonico et al. 2020), robust bias-corrected inference (Calonico et al. 2014).

First stage

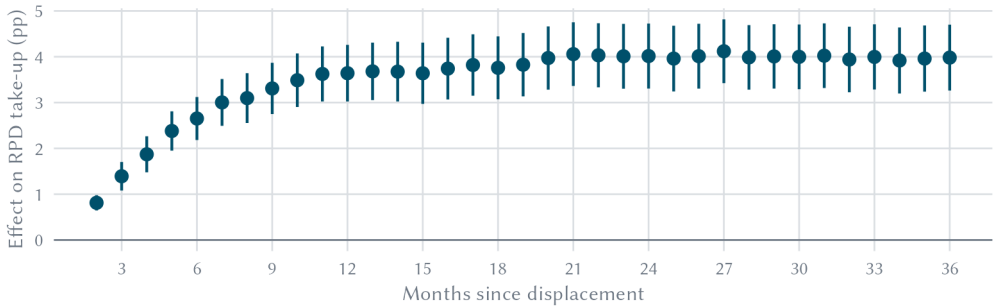


Crossing the threshold raises take-up within 12 months by **3.6 pp** (s.e. 0.3). [by horizon ›]

$F = 133$, on 81,709 observations inside a bandwidth of ±35 days. [ITT ›]

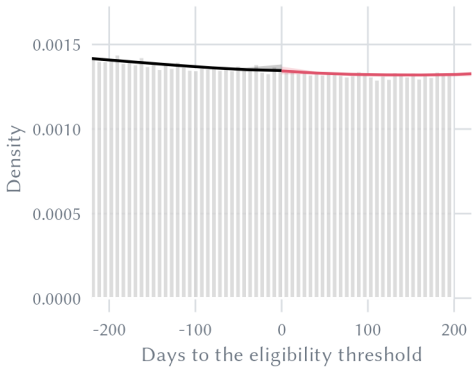
Strong instrument, small effect — consistent with cost internalization.

Take-up over the horizon



0.8 pp at two months, 3.6 at twelve, 4.0 by month 24. [by horizon ›] The flattening after month 12 is **not** non-compliance: ineligible workers reach Scheme B's five-year threshold and become eligible on their own.

Design validity



No manipulation (Cattaneo et al. 2020). Landing on the eligible side entails postponing your own dismissal by days — not a margin workers control.

Balance. Of 10 covariates, 3 reject at 5% individually; under Holm **none** survives. The largest jump is age — about 1.5 months against a mean of 24.7 years.

[balance ›] [continuity ›]

Bandwidth. Positive across ×0.5–×2 of the optimal width. [sensitivity ›]

How to read what follows

The first stage *is* the complier share after 12 months of displacement: about **4 in 100** workers near the threshold.

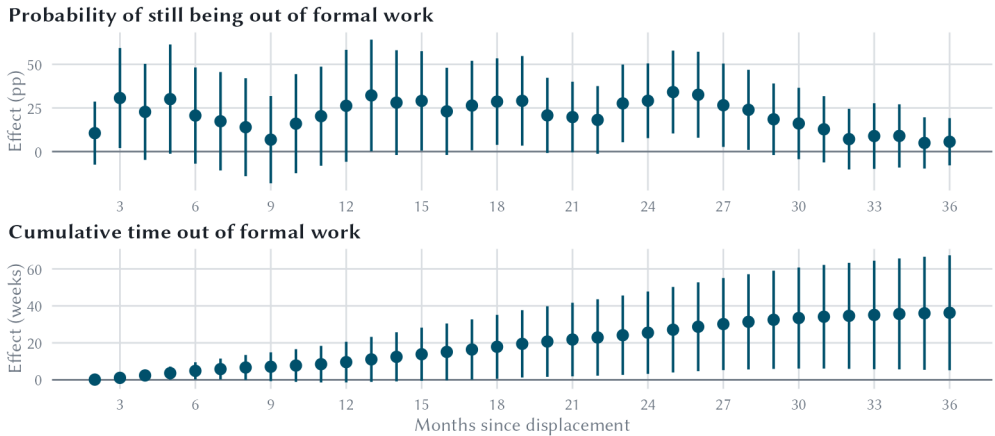
The LATE describes *them* — not the average worker, and not the average program user. Two consequences:

- Effects look large against population means, because they are concentrated in a small and specific group.
- The **reduced form is correspondingly small**: the ITT on 36-month duration is 0.65 weeks ($p = 0.21$). [all ITT estimates ›]

The reduced form is not in tension with the LATE. It is the same evidence expressed per capita rather than per user.

Results

Take-up lengthens time out of formal work



Take-up lengthens time out of formal work

Outcome	Effect	Std. err.	p	Ineligible mean
Still out of formal work at 3 months (pp)	30.7	(14.6)	0.036	77.8%
Weeks out of formal work over 36 months	36.3	(15.9)	0.022	51.5

Note: Fuzzy RD estimates of the effect of RPD take-up on compliers. Local linear, triangular kernel, MSE-optimal bandwidth; robust bias-corrected inference. Currencies in 2024 Mexican pesos.

Both significant at 5%. [discontinuities ›] [bandwidth ›] The 36-month effect is 70% of the 51.5 weeks an ineligible worker spends out of formal work.

Consistent with the UI literature, with the previous RPD evidence from surveys (Velázquez Guadarrama 2023), as well as with lump-sum severance in Brazil (Britto 2022).

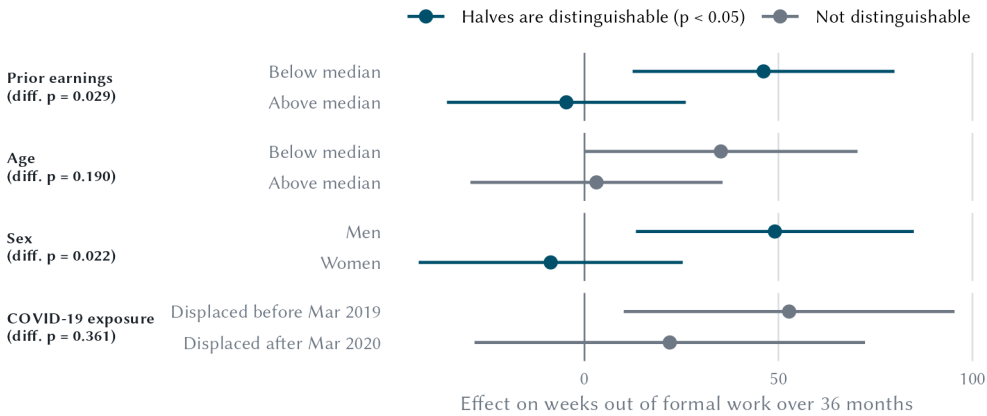
Nothing compensates the extra weeks

Outcome	Effect	Std. err.	p	Ineligible mean
Monthly earnings, next job	9,429	(4,883)	0.053	8,327
Total earnings, next job	67,096	(61,138)	0.272	87,306
Next job duration (weeks)	16	(15)	0.257	36
Cumulative earnings, 3 years	-20,379	(44,061)	0.644	148,762
Months worked, 3 years	-1	(3)	0.593	15

Note: Fuzzy RD estimates of the effect of RPD take-up on compliers. Local linear, triangular kernel, MSE-optimal bandwidth; robust bias-corrected inference. Currencies in 2024 Mexican pesos.

The next-job wage estimate is sizeable but misses 5% (p = 0.053); everything else is zero. [means ›] [ITT ›] Against Acemoglu and Shimer (2000) and Velázquez Guadarrama (2023); consistent with Britto (2022), González-Rozada and Ruffo (2023).

Who pays — and which contrasts survive a test



Who pays — and which contrasts survive a test

Each split is estimated on **disjoint** subsamples, each with its own bandwidth. A large coefficient in one half and a small one in the other does *not* establish that the halves differ. So test the difference directly: [estimates ›]

- **Prior earnings.** Below median 46 weeks vs. above median -4.7. Difference $p = 0.029$ — **distinguishable**.
- **Sex.** Men 49 weeks vs. women -8.7. Difference $p = 0.022$ — **distinguishable**.
- **Age** ($p = 0.190$) and **COVID-19 exposure** ($p = 0.36$) point the same way but are **not** distinguishable.

No subgroup shows a detectable three-year earnings gain. The *only* reemployment-wage gain significant at 5% accrues to workers already **above** the median ($6,417, $p = 0.035$).

Longer search, or exit into informality?

These data cannot tell the two apart. A worker who withdraws and then works informally or on her own account looks exactly like one still searching.

There is reason to think the second margin is real: Britto (2022) finds 57% of the displaced formal employment offset informally; Gerard and Gonzaga (2021) shows the efficiency cost is lower where formal reentry is unlikely; and for Mexico, Carreño Godínez (2025) finds RPD eligibility raises transitions into **self-employment**.

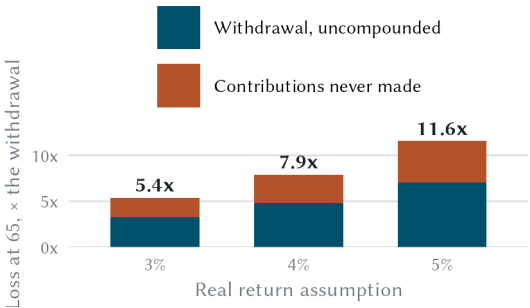
The retirement conclusion is invariant

If much of the 36.3 weeks is informal work, the *consumption* cost is smaller than it looks. The *pension* cost is identical either way: neither informal work nor self-employment generates contributions or accrues weeks.

What it costs at retirement

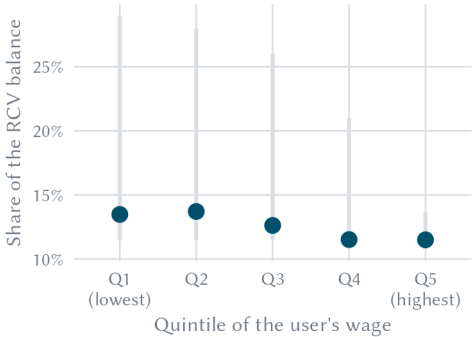
Two channels, one compounding factor

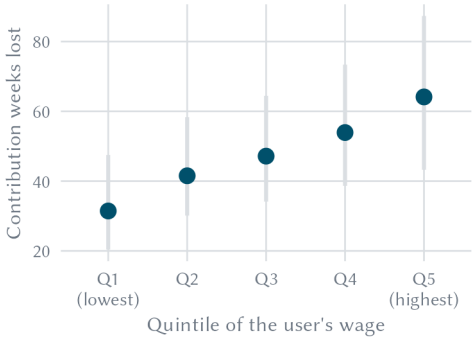
Channel 1 — the withdrawal stops compounding: $W(1+r)^n$
Channel 2 — contributions never made during the induced non-employment: $\bar{w} \cdot c \cdot \Delta \cdot (1+r)^n$
Both compound at the same rate, so channel 2's *share* is invariant to r — no need to take a stand on returns.



At the sample's own values ($7,691 withdrawn, $9,095 monthly wage, 36.3 extra weeks, 6.5% contribution rate, 40 years): the loss is **5.4–11.6× the amount withdrawn**, 39% of it from the unemployment. [full grid ›]

The withdrawn burden is regressive in the ratio





Low-wage users withdraw a **larger share** of a smaller balance: 29.0% of Q1 withdrawals take a quarter or more of the account, against 9.5% in Q5. [withdrawal ›]

Takeaways

Takeaways

1. **The individual-account prediction does not survive.** A benefit funded entirely from the worker's own savings still produces a large duration response — 36.3 weeks — with no matching gain.
2. **The pattern looks like liquidity, not classical moral hazard.** A large response, no compensating improvement, and a cost concentrated among below-median earners and among men.
3. **The cost is paid in the pension, and most of it is invisible.** 7.9× the withdrawal at a 4% real return, of which 39% comes from the induced unemployment rather than the withdrawal itself. [full grid ›]
4. **The cost moves with the cycle; the program's parameters do not.** How much reemployment the liquidity displaces depends on how much reemployment is available to displace (Chetty 2008).

Limitations

- **External validity.** The LATE describes compliers displaced in their third year of formal work. Not the average user, not the average worker.
- **Informality is unobserved.** See the discussion above; it bounds the consumption interpretation but not the pension one.
- **Precision.** The second-stage confidence intervals are wide (36-month duration: 5.2–67.4 weeks).
- **Control-group contamination.** Ineligible workers become eligible under Scheme B within the three-year window, so long-horizon estimates are a lower bound.

Backup

Summary statistics: covariates and previous job

Variable	Mean	Median	Std. dev.	N
Female	0.377	0.000	0.485	877,749
Year of birth	1993.4	1994.6	5.7	847,714
Year of entry to formal work	2014.6	2014.9	2.1	877,749
Year of displacement	2018.0	2018.3	2.1	877,749
Age at displacement	24.7	22.9	5.5	847,714
Days since account opened	1,265	1,259	103	877,749
No CURP	0.034	0.000	0.182	877,749
Previous job duration (weeks)	27.7	16.4	29.7	877,749
Previous job, monthly wage	9,095	6,669	19,424	877,749
Previous job, total earnings	54,236	25,769	82,491	877,749

‹ back to Data and sample

Summary statistics: the withdrawal and job search

Variable	Mean	Median	Std. dev.	N
Amount withdrawn	7,691	6,637	4,366	62,632
RCV balance at withdrawal	21,435	19,984	10,839	62,632
Contribution weeks at withdrawal	125.9	130.0	29.1	62,632
Days from displacement to withdrawal	441	228	477	62,632
Days of wages withdrawn	318	301	127	62,632
Still out of formal work, 3 months	0.785	1.000	0.411	877,749
Still out of formal work, 36 months	0.113	0.000	0.317	877,749
Weeks out of formal work, 3 months	12.1	12.9	1.8	877,749
Weeks out of formal work, 36 months	53.1	32.6	49.1	877,749

Withdrawal variables are defined on the subsample that used the program.

‹ back to Data and sample

Summary statistics: next job and medium term

Variable	Mean	Median	Std. dev.	N
Next job duration (weeks)	36.8	14.7	59.3	873,434
Next job, monthly wage	8,462	6,949	6,644	873,434
Next job, total earnings	91,888	23,412	245,995	873,434
Cumulative earnings, 3 years	149,524	102,487	180,265	877,749
Average monthly wage, 3 years	9,008	7,515	5,841	794,688
Months worked, 3 years	15	14	12	877,749

Monetary values in 2024 Mexican pesos.

‹ back to Nothing compensates

Covariate balance, with the Holm correction

Covariate	Effect	Std. err.	p	Holm p
Female	0	(0)	0.776	1.000
Date of birth	0	(0)	0.016	0.151
Entry to formal work	0	(0)	0.817	1.000
Date of displacement	0	(0)	0.622	1.000
Age	0	(0)	0.015	0.151
Days since account opened	-2	(1)	0.035	0.276
No CURP	0	(0)	0.295	1.000
Previous job duration (wks)	0	(0)	0.178	0.892
Previous job total earnings	1,635	(844)	0.053	0.369
Previous job monthly wage	311	(214)	0.147	0.879

Note: Sharp RD estimates of the eligibility effect on each covariate. Holm-adjusted p-values across the 10 tests.

‹ back to Design validity

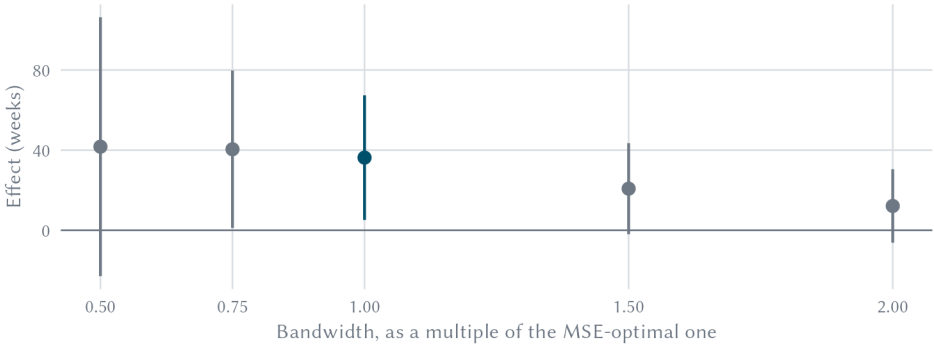
Reduced-form (ITT) estimates

Outcome	Effect	Std. err.	p	Eff. N
RPD take-up at 12 months (first stage)	0.036	(0.003)	0.000	81,709
Still out of formal work at 3 months	0.007	(0.005)	0.129	201,604
Weeks out of formal work, 36 months	0.648	(0.513)	0.206	241,684
Monthly earnings, next job	283	(163)	0.082	175,033
Total earnings, next job	1,469	(2,179)	0.500	303,679
Next job duration (weeks)	0.559	(0.619)	0.367	224,187
Cumulative earnings, 3 years	-231	(1,774)	0.897	260,301
Months worked, 3 years	-0.018	(0.105)	0.861	314,685

No reduced-form effect is significant at 5% — what a 3.6 pp first stage implies. Reduced form ÷ first stage ≠ the LATE: each estimate picks its own bandwidth.

‹ back to How to read

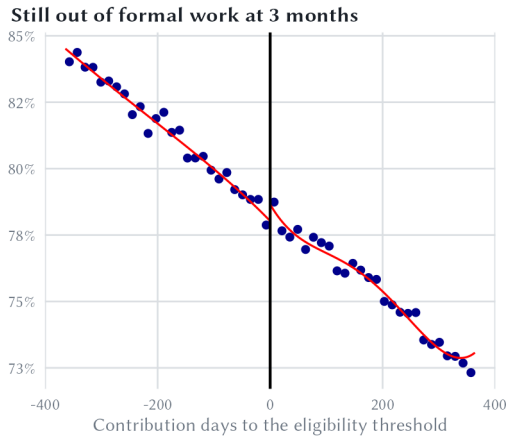
Sensitivity to the bandwidth

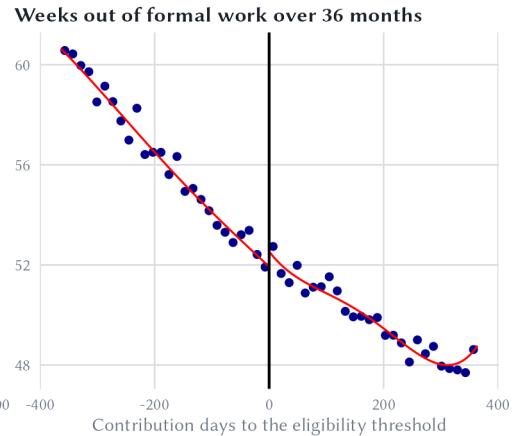


Positive throughout; significance concentrates near the optimal bandwidth, and the estimate attenuates as the window widens.

‹ back to Design validity

Discontinuities in the two main outcomes



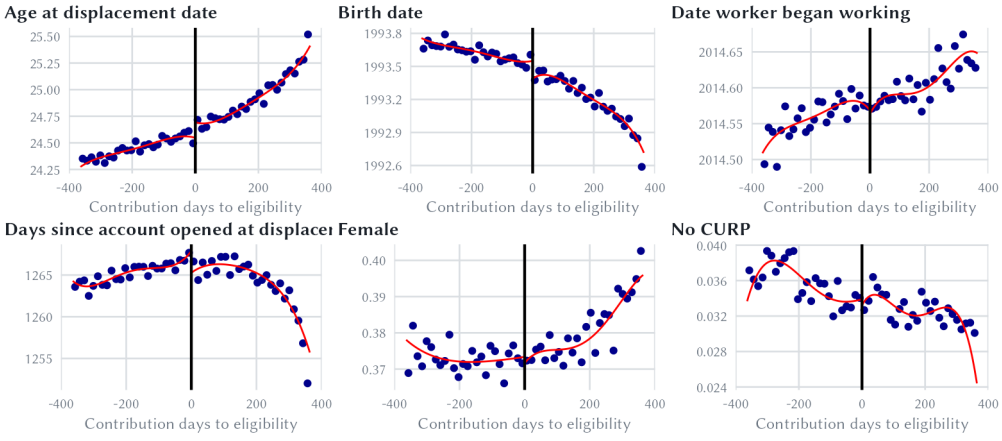


‹ back to the duration results

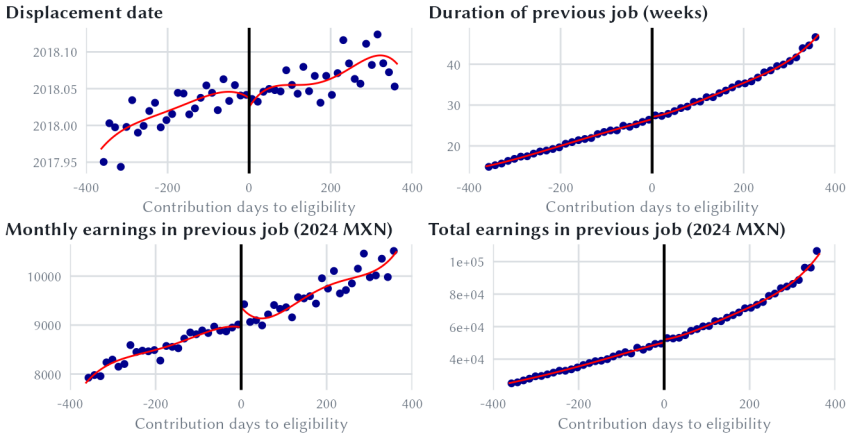
Take-up at every horizon

‹ back to Take-up over the horizon

Covariate continuity

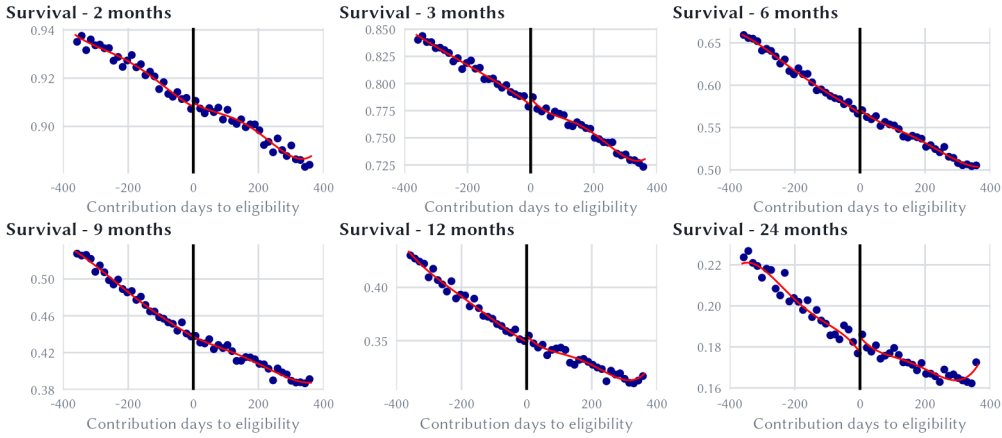


Previous-job continuity



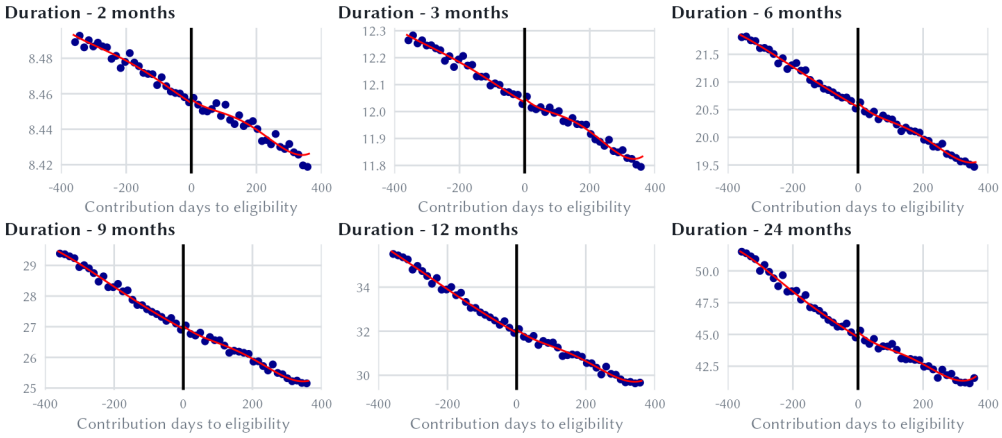
‹ back to Design validity

Survival in non-employment, by horizon



‹ back to the duration results duration ›

Duration of non-employment, by horizon



‹ back to the duration results

Heterogeneity: the underlying estimates

Split	Subgroup	Duration	Dur. p	Earnings	Wage	Diff. p
Prior earnings	Below median	46.2 (17.2)	0.007	-39,836 (38,498)	4,737 (5,197)	0.029
Prior earnings	Above median	-4.7 (15.7)	0.766	17,516 (73,028)	6,417 (3,044)	0.029
Age	Below median	35.2 (18.0)	0.051	-20,965 (42,940)	60 (1,805)	0.190
Age	Above median	3.1 (16.6)	0.852	-9,224 (59,252)	9,759 (6,752)	0.190
Sex	Men	49.1 (18.3)	0.007	3,074 (52,415)	11,252 (6,816)	0.022
Sex	Women	-8.7 (17.4)	0.616	-16,127 (59,432)	1,994 (2,161)	0.022
COVID-19	Before Mar 2019	52.8 (21.8)	0.015	-8,540 (55,380)	12,416 (8,274)	0.361
COVID-19	After Mar 2020	22.0 (25.7)	0.392	37,278 (69,127)	5,010 (2,770)	0.361

Note: Duration is weeks out of formal work over 36 months; Earnings is cumulative three-year earnings; Wage is monthly earnings in the next job. Standard errors in parentheses. Diff. p tests the difference between the two halves of each split on the duration outcome; subsamples are disjoint, so the variance of the difference is the sum of the variances.

‹ back to Who pays

Pension cost: the full grid

Rate	Contrib. rate	Channel 1	Channel 2	Total	Multiple	Ch. 2 share
3%	6.5%	25,087	16,096	41,183	5.4x	39.1%
3%	15.0%	25,087	37,145	62,233	8.1x	59.7%
4%	6.5%	36,923	23,690	60,613	7.9x	39.1%
4%	15.0%	36,923	54,670	91,593	11.9x	59.7%
5%	6.5%	54,142	34,738	88,880	11.6x	39.1%
5%	15.0%	54,142	80,166	134,308	17.5x	59.7%

Note: Constant real return, no fees, no partial recovery of contributions after reemployment. It combines a complier LATE (the extra weeks) with sample means (the withdrawal and the prior wage), so it describes a worker of average characteristics induced by the eligibility rule.

‹ back to Two channels

Aggregate cost of the program to date

Applying the same two channels to the whole withdrawal registry, at a 4.0% real return and the 6.5% contribution rate:

- $305 bn withdrawn (2024 pesos), across 24,320,649 withdrawals
- $415 bn once capitalised — channel 1
- $168 bn of contributions never made — channel 2
- **$583 bn total**, a markup of 1.40× on the capitalised withdrawals alone

Note the channel-2 share here is 29%, not the 39% of the individual calculation: the registry uses its own wage distribution rather than the estimation sample's mean, and the estimation sample sits at the two-year threshold where withdrawals are small relative to wages.

‹ back to Program use

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