Live Longer and Healthier: Impact of Pension Income on Mortality

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» Motivation

Rising old-age poverty has became a **key policy concern**. (Börsch-Supan and Coile, 2018).

Evaluating the **mortality impact** of pension income for low-income pensioners is important.

- Socioeconomic disparities in old-age mortality persist and have widened over time in many developed countries (Currie and Schwandt, 2016; Wenau et al., 2019).

However, there is little causal evidence on how **pension income affects mortality**(Snyder and Evans, 2006).

- Difficulty in isolating exogenous income variations from changes in other parameters of the public pension system.

» This paper

Explore *a* German **pension subsidy program** for low-paid workers introduced in 1992.

- Subsidy size is exogenously determined.
- Retirement timing response is limited. (Ye, 2022)

Use **two eligibility conditions**:

1. to study impact of subsidy program using *a* **DID** design.
2. *as* **instrument** for pension income in IV setting.

» Main findings

↑ **100€/month** of pension income (∼ 15%):

- ↓ prob. of dying before 65 by **23.5%**;
- ↓ prob. of dying before 70 by **8.2%**;
- ↓ prob. of dying before 75 by **2.5%**.
- ↑ age at death (censored at 75) by **2.4 months**.

Improvements in **both mental and physical health**.

Results are mostly **driven by men**.

» Literature

Impact of **old-age pension** income on mortality:

- Evidence from **developing countries** (Case, 2004; Jensen and Richter, 2004; Barham and Rowberry, 2013; Huang and Zhang, 2021; Miglino et al., 2023)
- Evidence from **developed countries** (Snyder and Evans, 2006; Johnsen and Willén, 2022)

» Institutional setting

German pension system

Pay-as-you go, replaces 50% of pre-retirement wage.

1 contribution year at average wage $\rightarrow$ 1 earning point (EP).

Pension income from sum of all cumulated EPs.

Pension subsidy reform in 1992

Eligibility criteria:

1. at least 35 contribution years;
2. average EPs at retirement (aep)$<$0.75.

Subsidy size is predetermined by average EPs in 1992 (aep_{92}).

▷ Pension income computation ▷ Subsidy computation ▷ Subsidy schedule

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» Data

Discountinues Pension Records (Rentenwegfälle, RTWF)

Novel admin data covering the universe of the German pensioners who died between 1994 and 2018

Baseline sample (401,932 obs):

- ↪ West Germans perceiving old-age pension;
- ↪ 1932 - 1942 cohorts;
- ↪ 0.45 - 1.05 aep_i, 30 - 40 contribution years.

Linked SHARE-RV

Survey data linked with active records from pension register.

Information on health, financial constraints, optimism.

Limited sample size (2,328 obs), wider restrictions.

▷ RTWF summary ▷ SHARE-RV

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» Difference-in-Differences

The estimation equation is:

$$Y_i = \alpha + \theta D_i \times Above35_i + \delta_1 D_i + \beta X_i + \tau + \lambda + \epsilon_i \qquad (1)$$

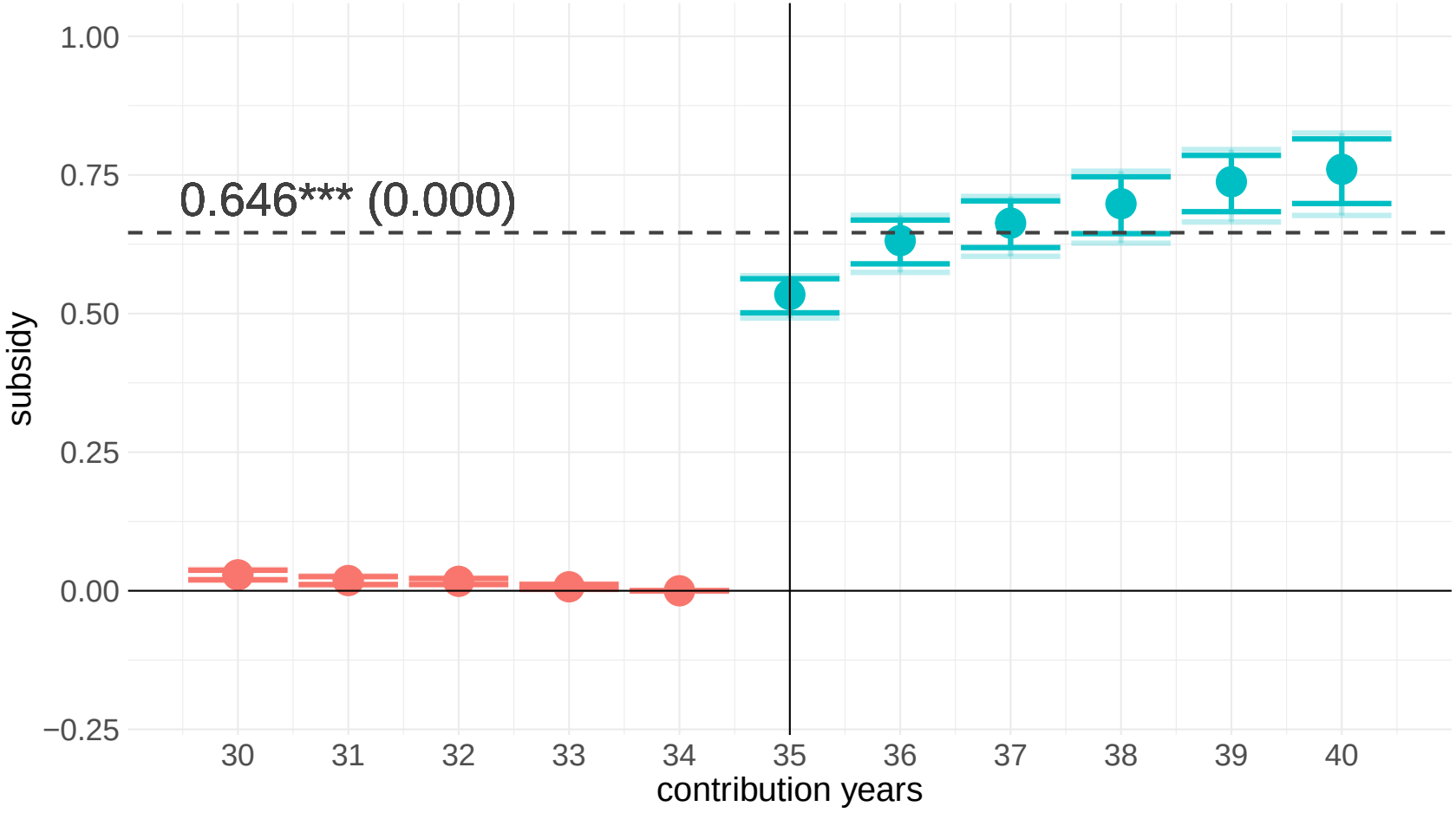
where:

- D_i: $aep < 0.75$ (i.e. poorer);
- $Above35_i$: having more than 35 years of contribution.
- θ captures the **intention-to-treatment effect**
- X_i: bio, economic and retirement pathway infos; ▷
- τ is the contribution years fixed effect;
- λ: birth cohort fixed effects.
- Standard errors clustered by birth year (wild-bootstrap p-values in brackets)

▷ Threats to validity ▷ Summary stats ▷ Identifying variation

» First stage: subsidy amount

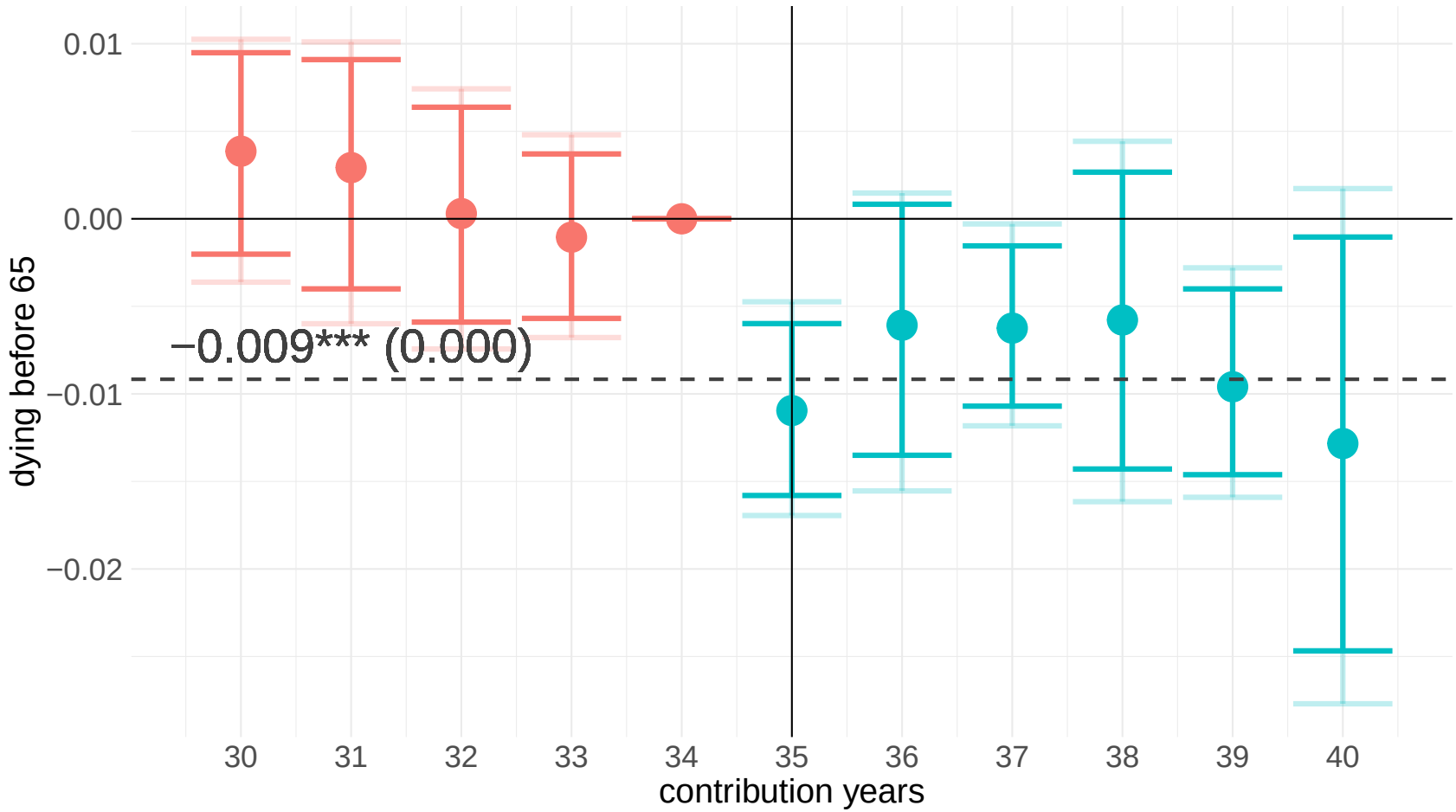
Mean pension income: 7.53 (100€/month)



▷ Prob(recipient) ▷ Gender

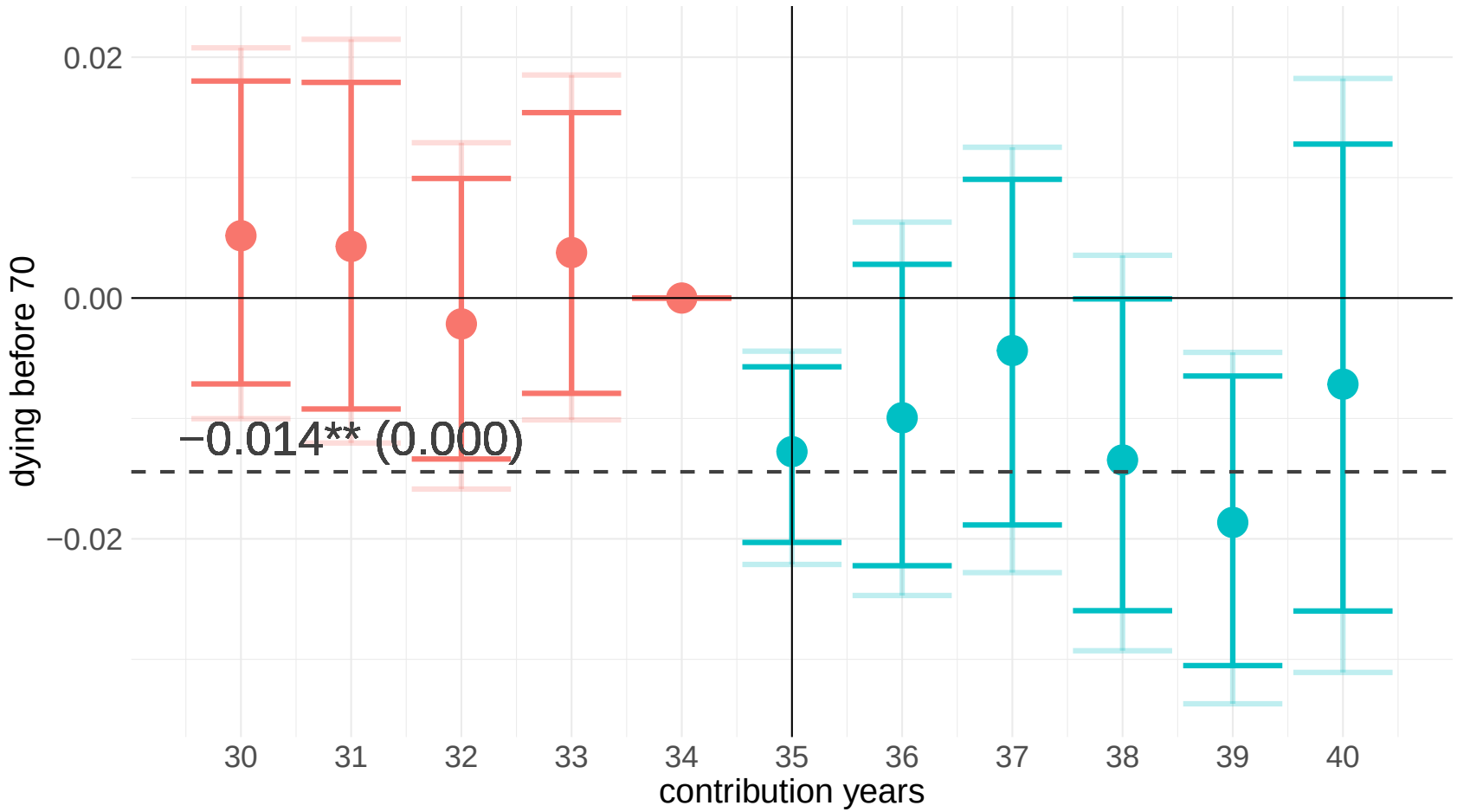
» Effect on probability of dying before 65

Mean: 0.051



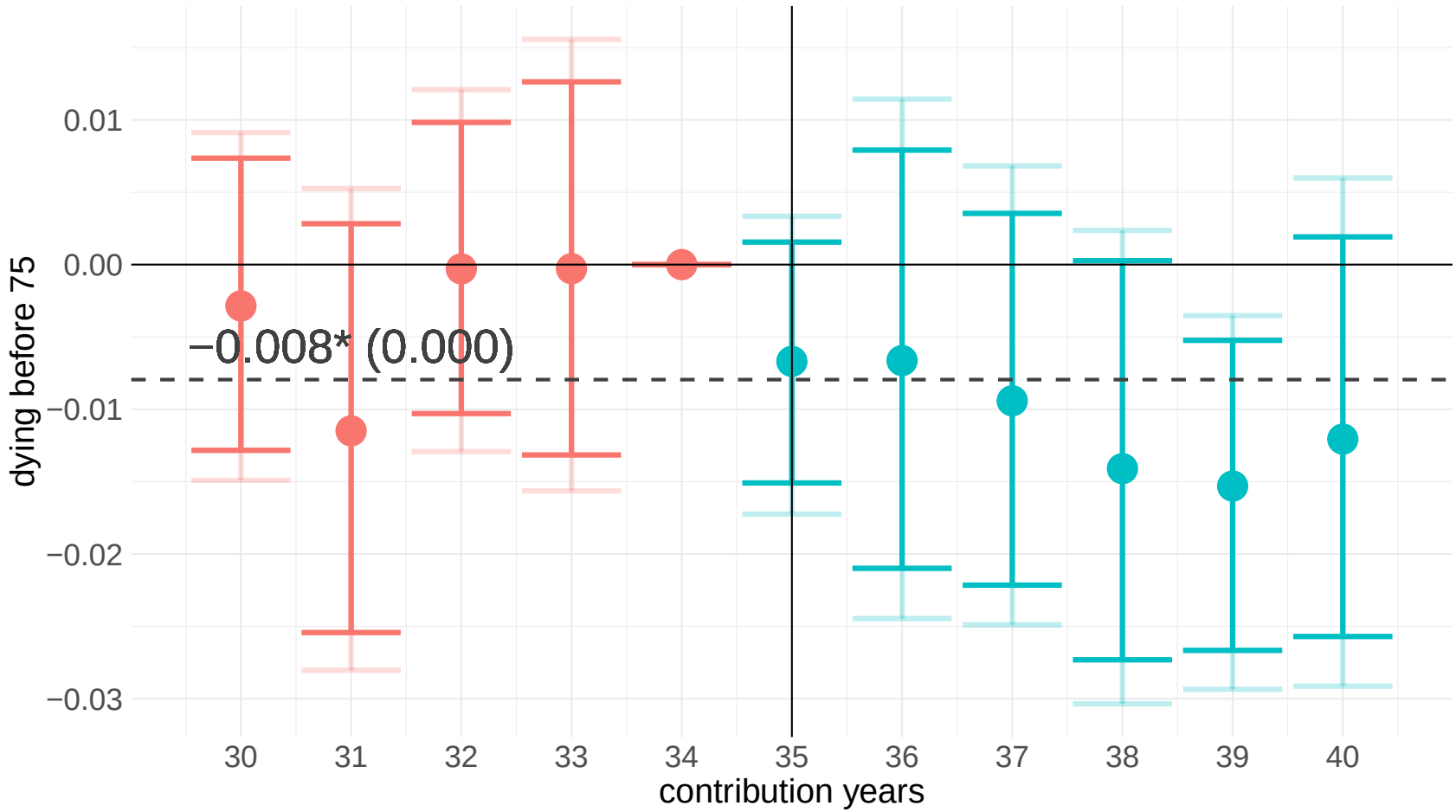
» Effect on probability of dying before 70

Mean: 0.257



» Effect on probability of dying before 75

Mean: 0.519



» Robustness and Placebos

Robustness checks include:

- ↪ variation of 1932-1942 cohorts restriction; ▷
- ↪ variation of 0.45-1.05 aep_i (income) restriction; ▷
- ↪ exclude retirees at exactly 35 contribution years; ▷
- ↪ finer time bins (semesters instead of years); ▷
- ↪ placebo sample of 1922-1931 cohorts; ▷
- ↪ placebo cutoffs for aep_i. ▷

▷ DiD Baseline ▷ DiD Robust ▷ Heterogeneity

» IV results: mortality

Effect of **additional pension income** on mortality and health.

Eligibility conditions as instrument for pension income.

IV results show ↑ **100€/month** pension income (∼15%): (*pension income-mortality elasticities*)

- ↓ prob. of dying before 65 by **23.5%**; (*-1.8*)
- ↓ prob. of dying before 70 by **8.2%**; (*-0.63*)
- ↓ prob. of dying before 75 by **2.5%**. (*-0.19*)

Results are **driven by men**: an implied average improvement of life expectancy at 60 about ∼**4 months** for men.

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» Mechanisms: health and optimism

Explore the responses in health outcomes using SHARE-RV data.

IV results show ↑ **100€/month** pension income (∼15%):

- ↑ physical and mental **health**;
- ↑ incidence of chronic lung disease and high blood pressure
- no impact on **diseases uncorrelated** with income;
- ↑ **optimism** towards life and future;
- ↓ **perceived financial constraints**.
- ↓ **long-term care dependency**.
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» Discussion: gender differences

We find men benefit from having more pension income, while women are not affected.

- Marital status/having children
- Two proxies for indeed poor families
  - a higher share of pension income in household income
  - the household has no assets
- Men with 35 years of contributions are more likely to be less healthy.

» Conclusion

Impact of German **old-age pension subsidy** on mortality and health.

No evidence of eligibility impacting **retirement choices**.

Additional pension income **reduces mortality**.

Live longer: An increase of **100€/month** pension income implies at least **4 more months** of expected life.

Healthier: Positive effects on **mental and physical health**.

Thank you for the attention!

Questions?

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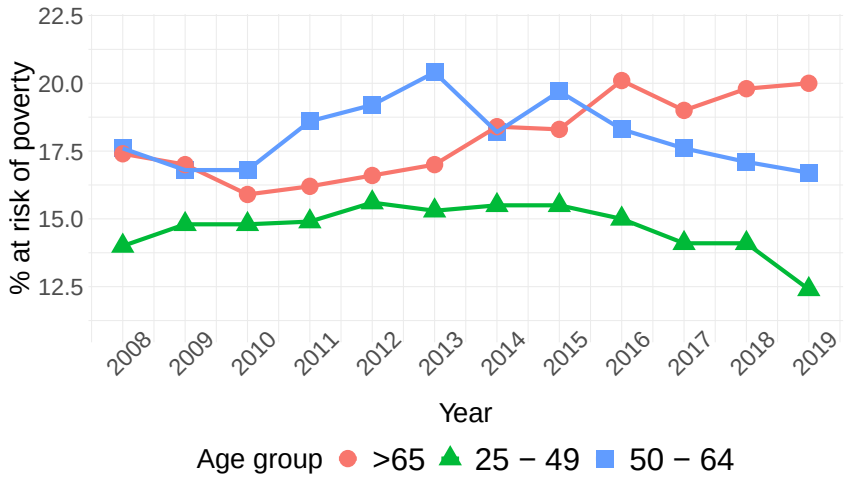
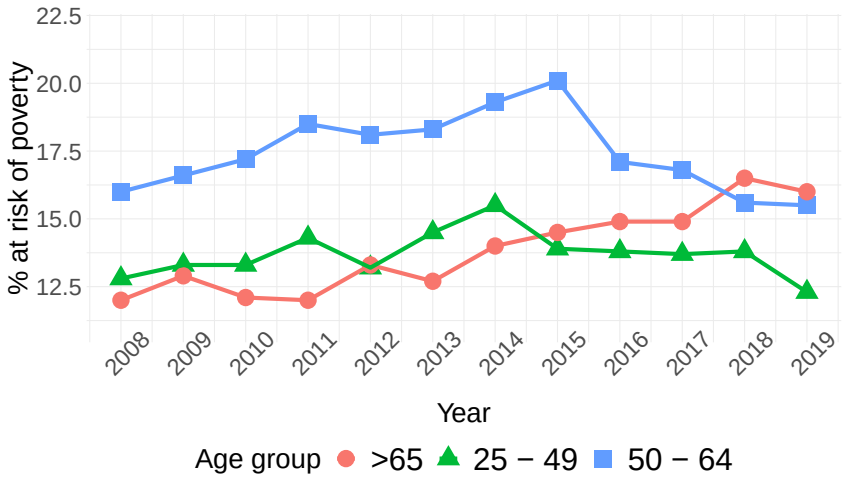
» Share of population at risk of poverty by gender



(a) Females



(b) Males

Source: EU-SILC

▷ Back

» Subsidy schedule

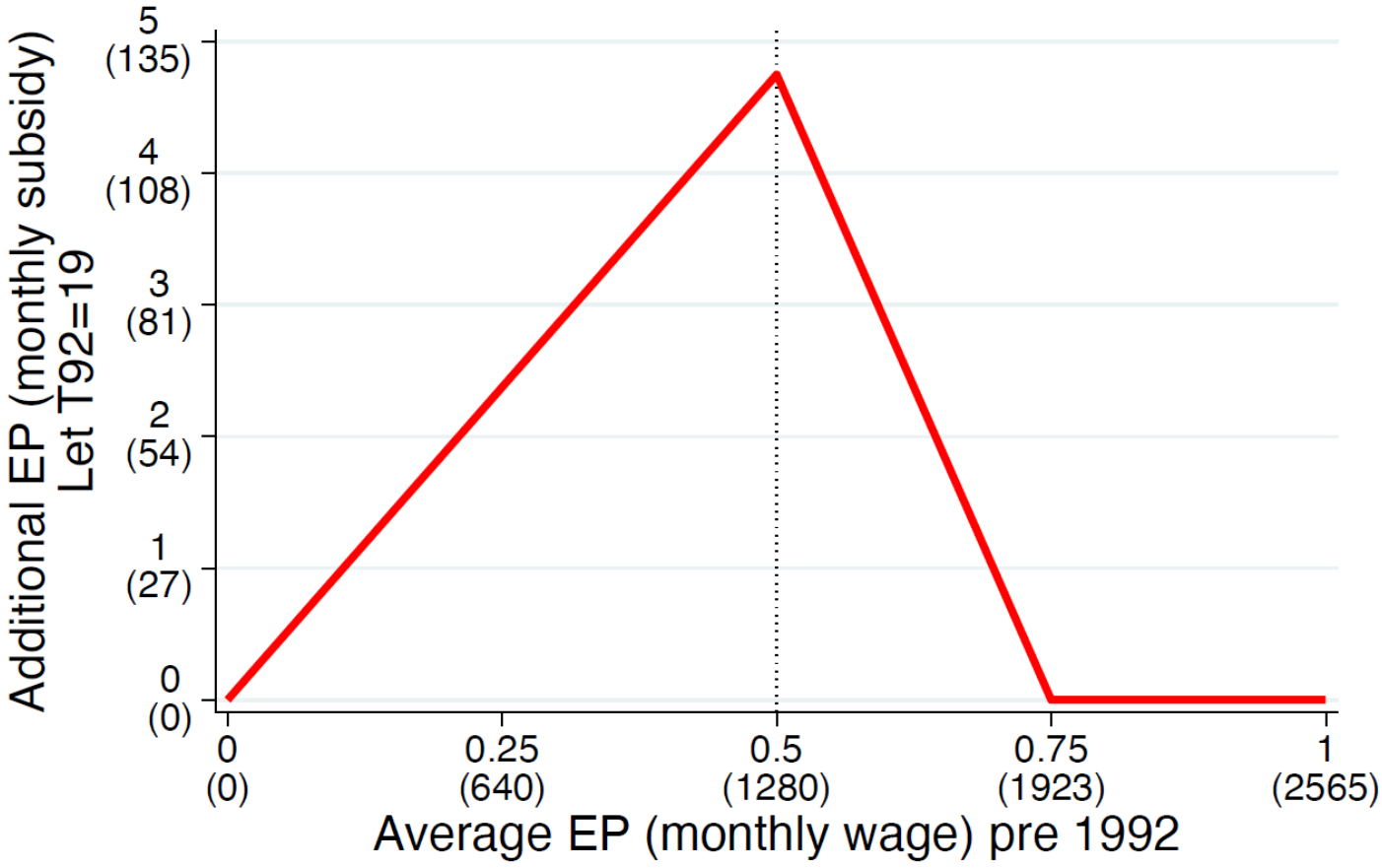


Figure 1: Subsidy amount (hundreds) and aep^{92}. *Source:* **?**.

Back to manipulation Back to subsidy Back to threats

» Computation of subsidy amount

The subsidy amount is computed as:

$$Subsidy_i = min\left(0.5 \times \sum_{\tau<92} EP_{i\tau}, 0.75 \times T_i^{92} - \sum_{\tau<92} EP_{i\tau}\right) \quad (2)$$

$$where\ EP_{i\tau} = \frac{\omega_{i\tau}}{\overline{\omega}_\tau}$$

where, for and individual i and each year of contribution τ:

- $EP_{i\tau}$: accumulated earnings points;
- T_i^{92}: years contributed before 1992;
- $\omega_{i\tau}$ wage in τ;
- $\overline{\omega}_\tau$ German average wage in τ.

In 2018, 1EP$\sim$31€/month. Back

» Computation of pension income

Pension income is computed as:

$$PB_{it} = \left(\sum_{\tau} EP_{i\tau} + Subsidy_i \right) \times PV_t, \tag{3}$$
$$where\ EP_{i\tau} = \frac{\omega_{i\tau}}{\overline{\omega}_{\tau}}$$

where:

- $EP_{i\tau}$: accumulated earnings points in contribution period τ;
- PV_t: aggregate monthly average pension value in year t;
- $\omega_{i\tau}$ wage of i in τ;
- $\overline{\omega}_{\tau}$ German average wage in τ.

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» Information revelation

Versicherungsnummer Abtl.
28 040158 L 166 4926

Deutsche Rentenversicherung
Braunschweig-Hannover

Deutsche Rentenversicherung Braunschweig-Hannover, 30875 Laatzen

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www.deutsche-rentenversicherung-braunschweig-hannover.de
info@drv-bsh.de

Kostenloses Servicetelefon:
0800 100048010

27. Oktober 2016

Pension information of Mr.Test

Rentenauskunft - kein Rentenbescheid

Sehr geehrter Herr TEST,

mit dieser Auskunft unterrichten wir Sie
- über die Höhe einer Rente wegen voller Erwerbsminderung
- über die Höhe der Regelaltersrente
- inwieweit die Voraussetzungen für verschiedene Rentenleistungen erfüllt sind
- über die gespeicherten rentenrechtlichen Zeiten (siehe Anlage "Versicherungsverlauf")
- über die persönlichen Entgeltpunkte (siehe Anlage "Berechnung der persönlichen Entgeltpunkte")

nach jetzigem Stand.

Die **Rente wegen voller Erwerbsminderung** würde **1.031,32 EUR** monatlich betragen, wenn von einem am **27.10.2016** eingetretenen Leistungsfall ausgegangen würde.
Hierbei ist zusätzlich die Zeit bis zur Vollendung des 62. Lebensjahres berücksichtigt worden (Zurechnungszeit).
Die Rente wegen teilweiser Erwerbsminderung würde die Hälfte des errechneten Betrages ergeben.
Wir haben nicht geprüft, ob eine Erwerbsminderung vorliegt.

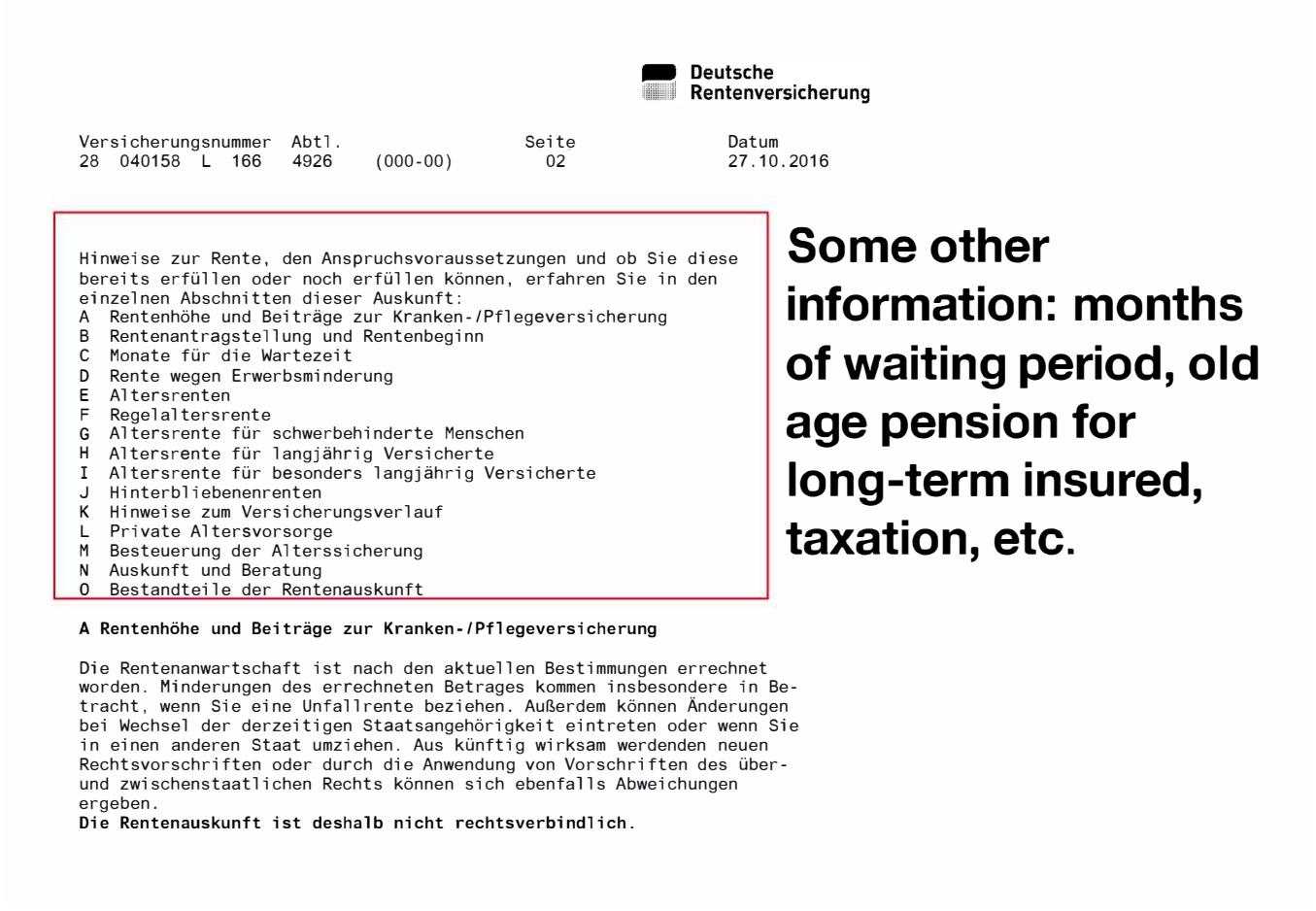
Die **Regelaltersrente**, die **ab 01.02.2024** gezahlt werden kann, würde **1.326,35 EUR** monatlich betragen, wenn der Berechnung ausschließlich die bisher gespeicherten rentenrechtlichen Zeiten sowie der derzeit maßgebende aktuelle Rentenwert zugrunde gelegt werden.
Die Berechnung der Monatsrente ergibt sich aus der Anlage "Berechnung der Rente".

Pension benefits at statutory retirement age

Zukünftige Anpassungen
Aufgrund zukünftiger Rentenanpassungen kann die errechnete Rente in Höhe von 1.326,35 EUR tatsächlich höher ausfallen. Allerdings können auch wir die Entwicklung nicht vorhersehen. Deshalb haben wir - ohne Berücksichtigung des Kaufkraftverlustes - zwei mögliche Varianten für Sie gerechnet. Beträgt der jährliche Anpassungssatz 1 Prozent, so ergäbe sich eine monatliche Rente von etwa 1.420 EUR. Bei einem jährlichen Anpassungssatz von 2 Prozent ergäbe sich eine monatliche Rente von etwa 1.520 EUR.

Pension benefits at statutory retirement age if pension value increases by 1 % in the

» Information revelation (cont.)



Deutsche Rentenversicherung

Versicherungsnummer	Abtl.		Seite	Datum
28 040158 L 166	4926	(000-00)	02	27.10.2016

Hinweise zur Rente, den Anspruchsvoraussetzungen und ob Sie diese bereits erfüllen oder noch erfüllen können, erfahren Sie in den einzelnen Abschnitten dieser Auskunft:

A Rentenhöhe und Beiträge zur Kranken-/Pflegeversicherung
B Rentenantragstellung und Rentenbeginn
C Monate für die Wartezeit
D Rente wegen Erwerbsminderung
E Altersrenten
F Regelaltersrente
G Altersrente für schwerbehinderte Menschen
H Altersrente für langjährig Versicherte
I Altersrente für besonders langjährig Versicherte
J Hinterbliebenenrenten
K Hinweise zum Versicherungsverlauf
L Private Altersvorsorge
M Besteuerung der Alterssicherung
N Auskunft und Beratung
O Bestandteile der Rentenauskunft

A Rentenhöhe und Beiträge zur Kranken-/Pflegeversicherung

Die Rentenanwartschaft ist nach den aktuellen Bestimmungen errechnet worden. Minderungen des errechneten Betrages kommen insbesondere in Betracht, wenn Sie eine Unfallrente beziehen. Außerdem können Änderungen bei Wechsel der derzeitigen Staatsangehörigkeit eintreten oder wenn Sie in einen anderen Staat umziehen. Aus künftig wirksam werdenden neuen Rechtsvorschriften oder durch die Anwendung von Vorschriften des über- und zwischenstaatlichen Rechts können sich ebenfalls Abweichungen ergeben.
Die Rentenauskunft ist deshalb nicht rechtsverbindlich.

Some other information: months of waiting period, old age pension for long-term insured, taxation, etc.

» Information revelation (cont.)

Deutsche Rentenversicherung

Versicherungsnummer	Abtl.	Anlage	Seite	Datum
28 040158 L 166	4926 (000-00)		03	27.10.2016

Entgeltpunkte für Beitragszeiten

Mindestentgeltpunkte bei geringem Arbeitsentgelt

Die Entgeltpunkte für Pflichtbeitragszeiten bis 31.12.1991, die nicht als beitragsgeminderte Zeiten gekennzeichnet sind und nicht während des Bezuges einer Rente aus eigener Versicherung liegen (vollwertige Pflichtbeitragszeiten), sind auf das 1,5fache des tatsächlichen Durchschnittswertes, höchstens jedoch auf 0,0625 monatlich anzuheben, wenn sich aus allen vollwertigen Pflichtbeitragszeiten ein Durchschnitt von weniger als 0,0625 Entgeltpunkten ergibt.

43,6502 Entgeltpunkte : 588 Monate = 0,0742 Punkte

Der Monatsdurchschnitt aus allen vollwertigen Pflichtbeitragszeiten erreicht den Wert 0,0625.
Zusätzliche Entgeltpunkte sind nicht zu ermitteln.

Summe der Entgeltpunkte für 588 Monate Beitragszeit 43,6502

Für Zeiten im Beitrittsgebiet und für reichsgesetzliche Zeiten außerhalb der Bundesrepublik Deutschland sind die Entgeltpunkte als Entgeltpunkte (Ost) zu berücksichtigen.
Das sind 1,5633 Entgeltpunkte (Ost) für 12 Monate
Damit verbleiben 42,0869 Entgeltpunkte für 576 Monate

Detailed calculation of the entitled additional EPs from the subsidy program.

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» Pension subsidy program

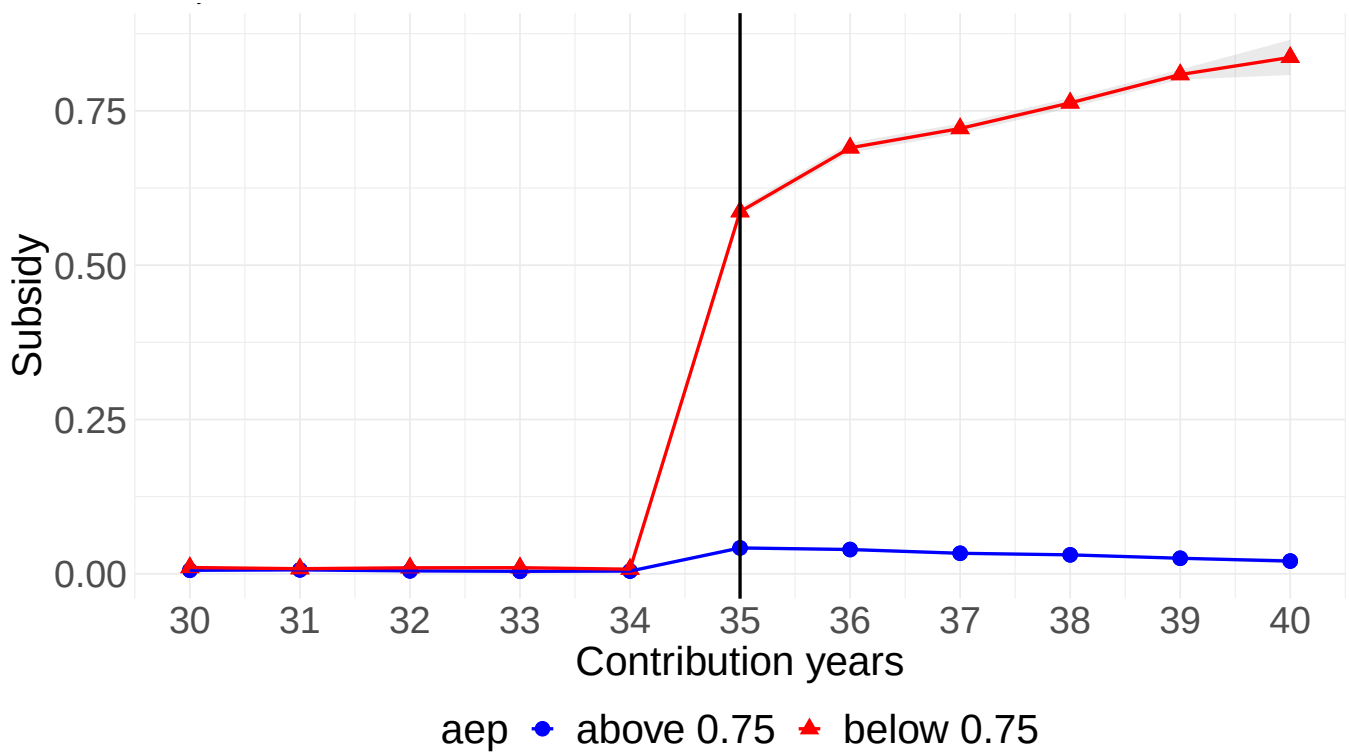

Figure 2: Mean subsidy by contribution years. *Source: RTWF.*

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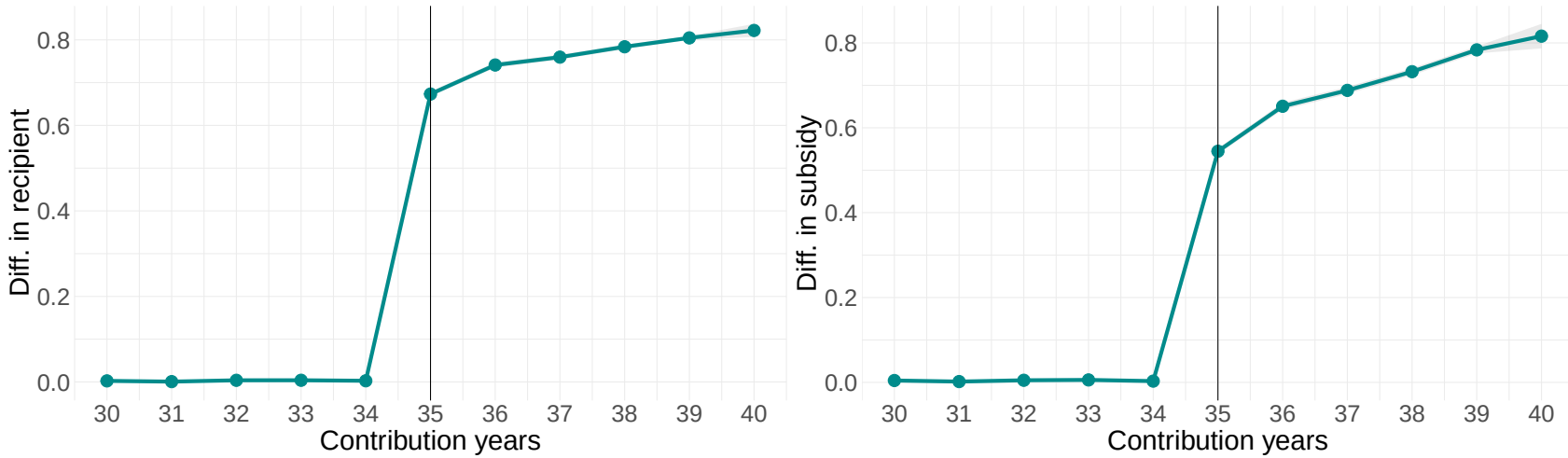
» Subsidy program



(a) Prob. being recipient (b) Subsidy amount (100€)

Figure 3: Difference in mean probability of being recipient and subsidy amount between $aep_i < 0.75$ and $aep_i > 0.75$ by number of contribution years. *Source: RTWF.*

▷ Back ▷ Back to strategy

» Identifying variation: pension income without subsidy

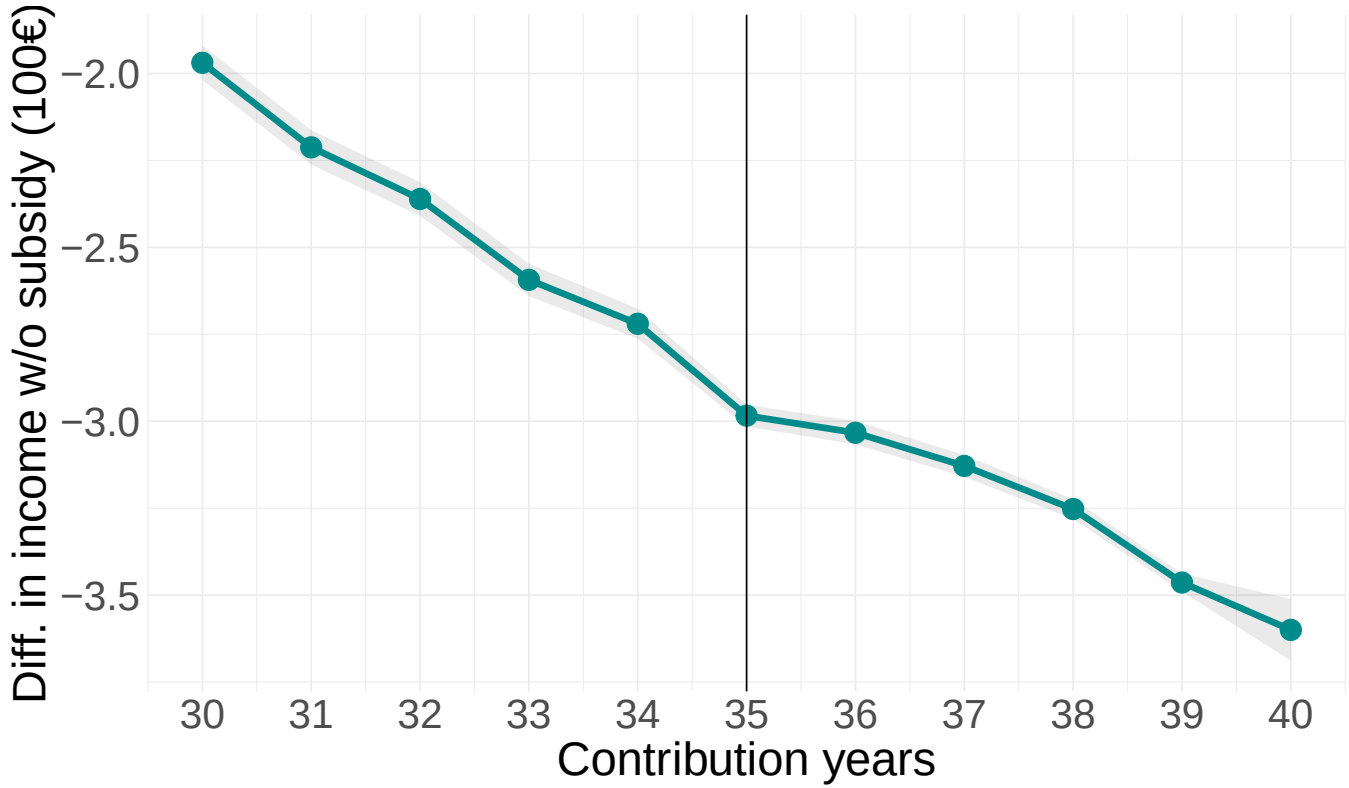


Figure 4: Difference in pension income w/o subsidy between $aep_i < 0.75$ and $aep_i > 0.75$ by contribution years.

Source: RTWF.

▷ Back ▷ Subsidy ▷ Mortality

» Identifying variation: pension income

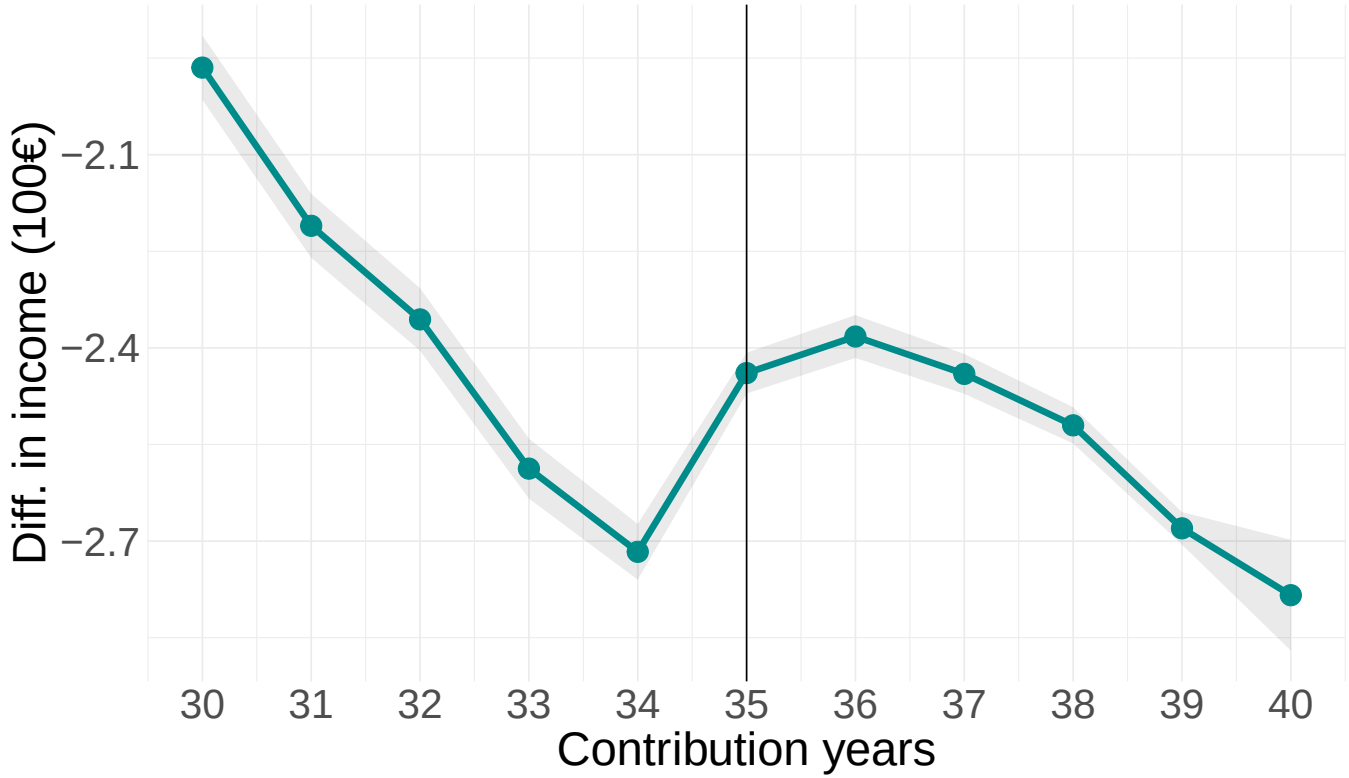
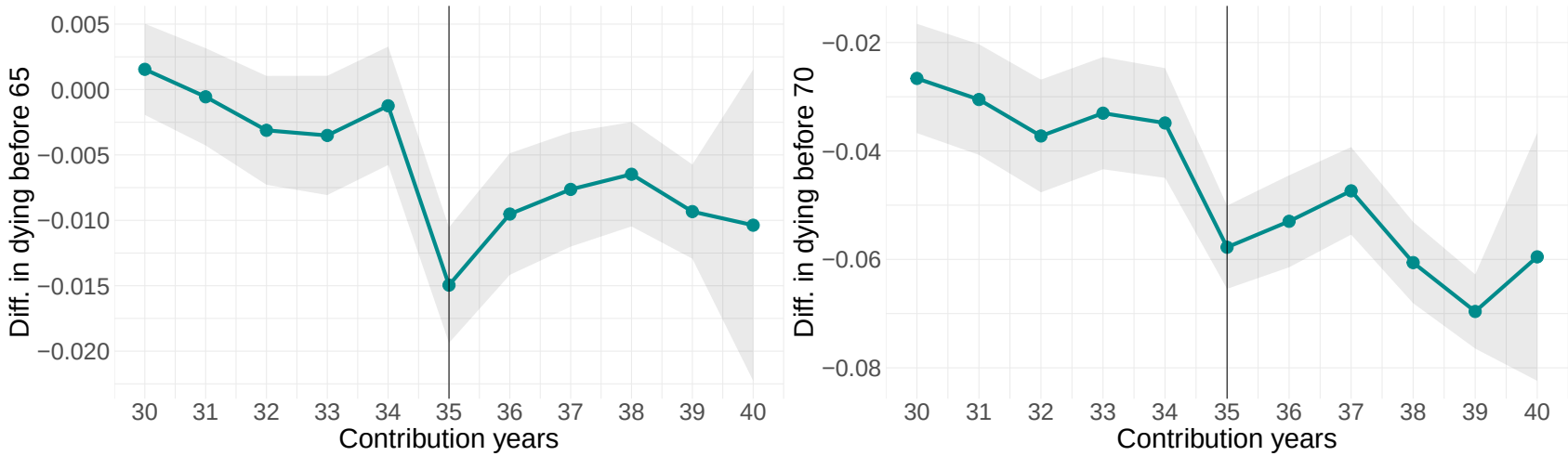


Figure 5: Difference in pension income between $aep_i < 0.75$ and $aep_i > 0.75$ by contribution years.

Source: RTWF.

▷ Back ▷ Subsidy ▷ Mortality

» Mortality outputs



(a) Prob. dying before 65 (b) Prob. dying before 70

Figure 6: Difference in mean probability of dying before 65 and 70 between $aep_i < 0.75$ and $aep_i > 0.75$ by number of contribution years. *Source: RTWF.*

▷ Back ▷ Back to strategy

» Threats to validity

Individuals might change their behaviour in order to received the subsidy.

Subsidy size is determined by aep_i^{92}: cannot be influenced.

▷ Subsidy schedule

aep_i might be influenced by accepting lower wages after 1992:

- ↪ aep_i highly correlated with aep_i^{92};
- ↪ unlikely to be profitable;
- ↪ no evidence in data. ▷ aep_i distribution

Contribution years might be increased by working longer.

- ↪ no evidence in data. ▷ C.Y. distribution
- ↪ if anything, eligible individuals anticipate retirement.

▷ Back

» Distribution of contribution years by aep

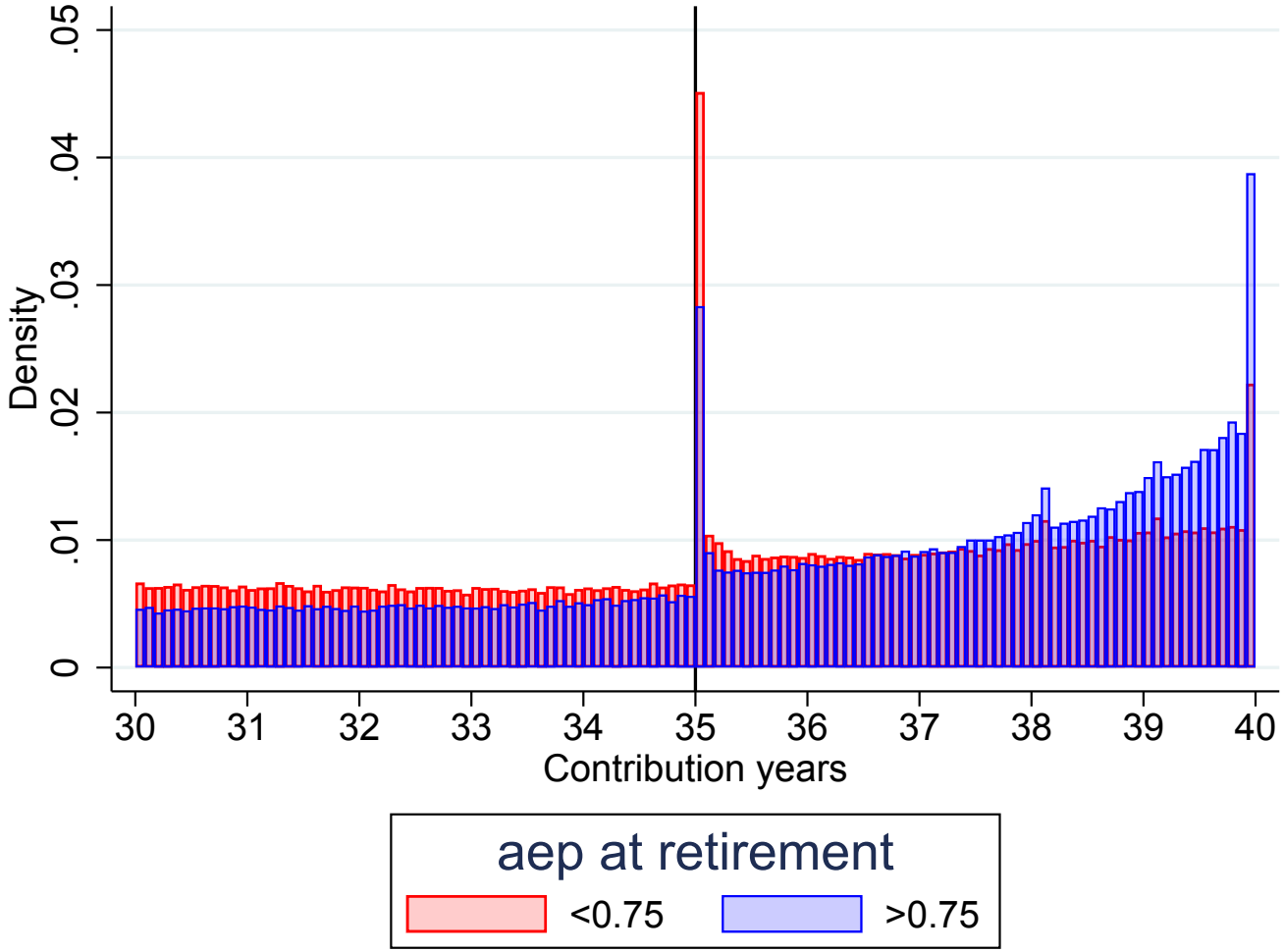


Figure 7: Distribution of contribution years by aep_i below 0.75. *Source: RTWF.*

Back

» Distribution of contribution years by aep (cont.)

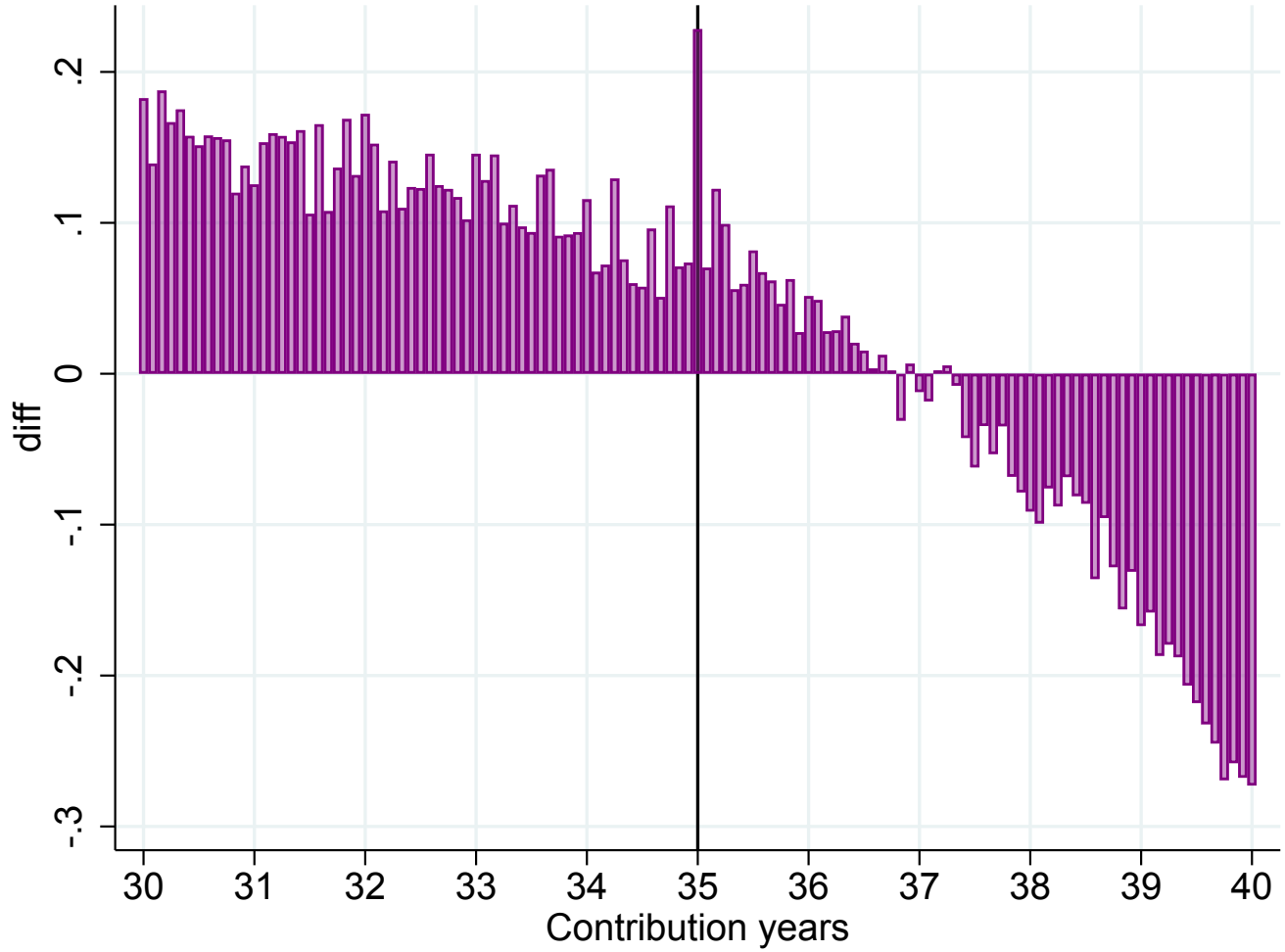


Figure 8: Difference in distribution of contribution years by aep_i below 0.75. *Source: RTWF.*

Back

» Distribution of aep by contribution years (cont.)

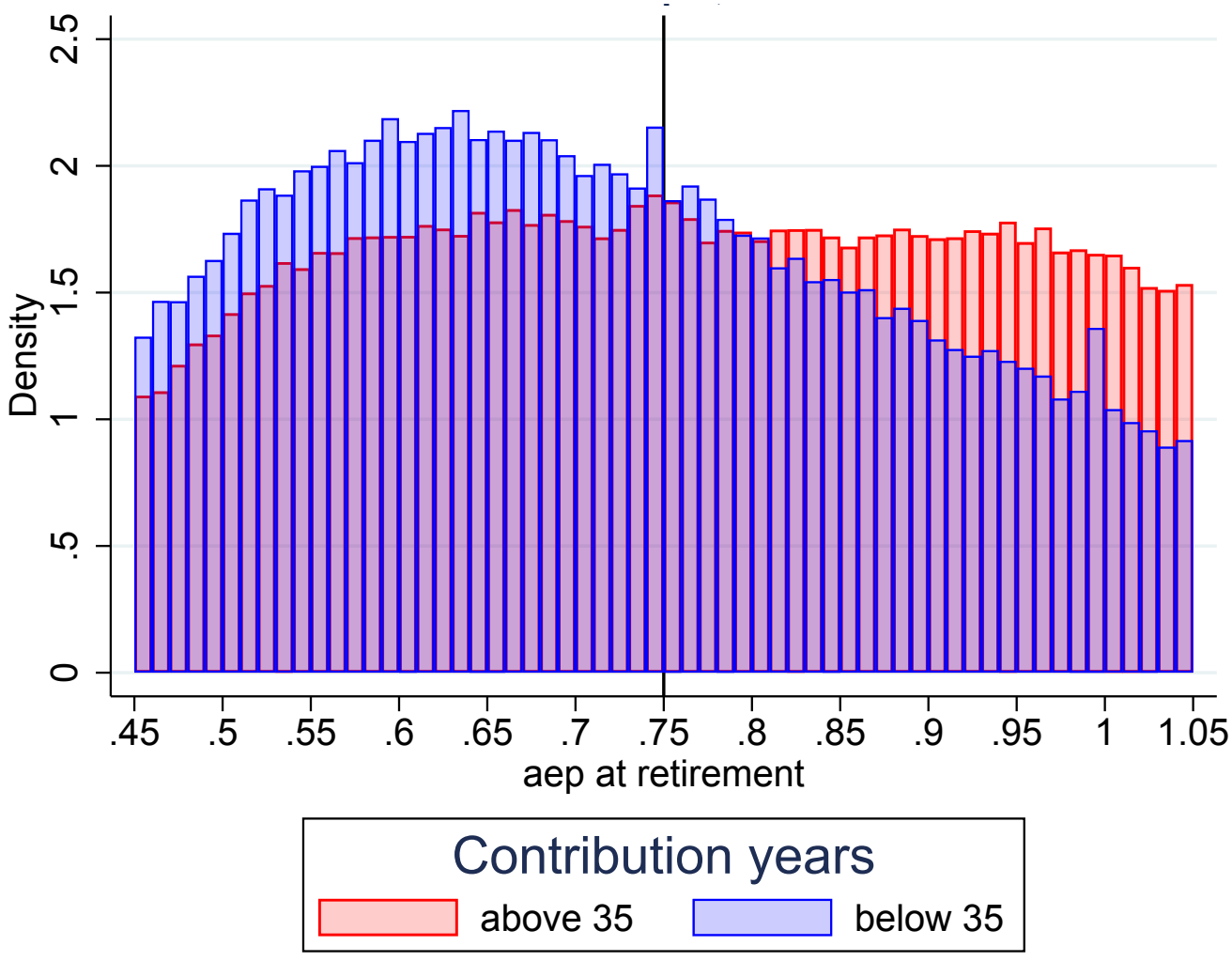


Figure 9: Distribution aep_i by contribution years above 35. *Source: RTWF.*

Back

» Summary statistics (RTWF)

	West Germans			1932-1942			Baseline		
	Mean	Std.Dev.	Obs	Mean	Std.Dev.	Obs	Mean	Std.Dev.	Obs
Mortality									
Dying before 65	0.054	0.226	4,442,649	0.053	0.225	2,612,036	0.051	0.220	401,932
Dying before 70	0.268	0.443	4,442,649	0.249	0.432	2,612,036	0.257	0.437	401,932
Dying before 75	0.505	0.500	4,442,649	0.512	0.500	2,612,036	0.519	0.500	401,932
Biographical information									
Birth year	1935.4	6.153	4,442,649	1936.4	2.968	2,612,036	1936.3	2.970	401,932
Male	0.578	0.494	4,442,649	0.609	0.488	2,612,036	0.378	0.485	401,932
Married	0.607	0.488	4,442,649	0.681	0.466	2,612,036	0.593	0.491	401,932
Number of children	0.903	1.402	4,442,649	0.827	1.349	2,612,036	1.387	1.574	401,932
Public HI	0.839	0.367	4,442,649	0.844	0.363	2,612,036	0.888	0.316	401,932
Pension accumulation									
Contribution years (C.Y.)	35.452	11.150	4,442,649	36.480	10.724	2,612,036	35.472	2.870	401,932
aep_i	0.912	0.322	4,439,960	0.944	0.319	2,610,792	0.745	0.165	401,932
aep_i<0.75	0.342	0.474	4,442,649	0.298	0.458	2,612,036	0.520	0.500	401,932
C.Y.>35	0.636	0.481	4,442,649	0.691	0.462	2,612,036	0.663	0.473	401,932
Pension income and subsidy									
PI	9.674	5.845	4,442,832	10.367	5.774	2,612,035	7.526	2.684	401,932
PI w/o subsidy	9.529	5.896	4,442,510	10.223	5.844	2,612,035	7.281	2.636	401,932
Subsidy	0.145	0.474	4,442,510	0.143	0.458	2,612,035	0.245	0.502	401,932
Recipient	0.127	0.333	4,442,649	0.128	0.334	2,612,036	0.285	0.452	401,932
Treated	0.147	0.354	4,442,649	0.144	0.351	2,612,036	0.324	0.468	401,932
Pension pathway									
Disability pension	0.126	0.332	4,442,649	0.143	0.350	2,612,036	0.133	0.340	401,932
Unemp. pension	0.121	0.327	4,442,649	0.173	0.378	2,612,036	0.076	0.266	401,932
Women pension	0.093	0.290	4,442,649	0.128	0.335	2,612,036	0.234	0.423	401,932
Retirement									
Age at claiming pension	63.861	3.078	4,442,548	63.113	2.544	2,612,035	63.102	2.382	401,932

▷ Back

» Data: SHARE-RV

Survey on Health, Ageing and Retirement in Europe (SHARE).

Linked with active records from German pension insurance (SHARE-RV).

Individuals are alive.

Adds information on health, SES, financial constraints, attitudes towards the future.

Baseline sample (2,328 observations)

- ↪ West Germany residents with German nationality;
- ↪ perceiving old-age pension;
- ↪ born after 1932;
- ↪ 0.25 - 1.25 aep_i;
- ↪ 10 - 60 contribution years.

▷ Back

» Treatment and control group

	Baseline		Treatment		Control	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Mortality						
Dying before 65	0.051	0.220	0.057	0.232	0.048	0.214
Dying before 70	0.257	0.437	0.240	0.427	0.265	0.441
Dying before 75	0.519	0.500	0.494	0.500	0.532	0.499
Biographical information						
Birth year	1936.27	2.97	1936.25	2.99	1936.28	2.96
Male	0.378	0.485	0.203	0.403	0.462	0.499
Married	0.593	0.491	0.591	0.492	0.594	0.491
Number of children	1.387	1.574	1.802	1.567	1.188	1.539
Public HI	0.888	0.316	0.899	0.301	0.882	0.323
Obs.	401,932	401,932	130,362	130,362	271,570	271,570

▷ Back ▷ Back ES

» Treatment and control group

	Baseline		Treatment		Control	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Pension accumulation						
C.Y.	35.472	2.870	37.035	1.511	34.722	3.059
aep_i	0.745	0.165	0.610	0.084	0.810	0.155
aep_i<0.75	0.520	0.500	1.000	0.000	0.290	0.454
C.Y.>35	0.663	0.473	1.000	0.000	0.502	0.500
Pension income and subsidy						
PI w/o subsidy	7.281	2.636	6.319	1.747	7.743	2.857
PI	7.526	2.684	7.032	1.771	7.762	2.863
Subsidy	0.245	0.502	0.713	0.642	0.020	0.137
Recipient	0.285	0.452	0.813	0.390	0.032	0.177
Treated	0.324	0.468	1.000	0.000	0.000	0.000
Pension pathway						
Disability pension	0.133	0.340	0.172	0.377	0.115	0.319
Unemp. pension	0.076	0.266	0.049	0.215	0.090	0.286
Women pension	0.234	0.423	0.327	0.469	0.189	0.391
Retirement						
Age at claiming pension	63.102	2.382	62.557	2.374	63.364	2.341
Obs.	401,932	401,932	130,362	130,362	271,570	271,570

▷ Back ▷ Back ES

» Controls

	Baseline		Treatment		Control	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Biographical information						
Birth year	1936.27	2.98	1936.25	2.99	1936.28	2.96
Male	0.378	0.485	0.203	0.403	0.462	0.499
Married	0.593	0.491	0.591	0.492	0.594	0.491
Number of children	1.387	1.574	1.802	1.567	1.188	1.539
Without HI	0.035	0.184	0.028	0.166	0.038	0.192
Private HI	0.078	0.267	0.073	0.260	0.080	0.271
Public HI	0.888	0.316	0.899	0.301	0.882	0.323
Pension accumulation						
C.Y.	35.472	2.870	37.035	1.511	34.722	3.059
aep_i<0.75	0.520	0.500	1.000	0.000	0.290	0.454
C.Y.>35	0.663	0.473	1.000	0.000	0.502	0.500
PI w/o subsidy	7.281	2.636	6.319	1.747	7.743	2.857
Pension pathway						
Disability pension	0.133	0.340	0.172	0.377	0.115	0.319
Unemp. pension	0.076	0.266	0.049	0.215	0.090	0.286
Women pension	0.234	0.423	0.327	0.469	0.189	0.391
Obs.	401,932	401,932	130,362	130,362	271,570	271,570

▷ Back

» Difference-in-Difference

The estimation equation is:

$$Y_{ieg} = \delta_0 + \theta D_e \times Above35_g + \delta_1 D_e + \boldsymbol{\delta}_3 \boldsymbol{X}_{ieg} + \boldsymbol{\tau} + \boldsymbol{\lambda} + \varepsilon_{ieg} \quad (4)$$

where:

- Y_{ieg}: outcome of interest for individual i;
- D_e: indicator for $aep < 0.75$;
- $Above35_g$: indicator for more than 35 contribution years;
- $\boldsymbol{X}_{ieg}$: bio, economic and retirement pathway infos; ▷
- $\boldsymbol{\tau}$: contribution years fixed effect;
- $\boldsymbol{\lambda}$: cohort fixed effect.

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» Difference-in-Difference

The estimation equation is:

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- $\boldsymbol{X}_{ieg}$: bio, economic and retirement pathway infos; ▷
- $\boldsymbol{\tau}$: contribution years fixed effect;
- $\boldsymbol{\lambda}$: cohort fixed effect.

Back

» Baseline estimates (DiD)

	(1)	(2)	(3)	(4)	Mean
First stage					
Recipient	0.755***	0.754***	0.731***	0.730***	0.285
	[0.000]	[0.000]	[0.000]	[0.000]	
Subsidy	0.686***	0.686***	0.658***	0.646***	0.245
	[0.000]	[0.000]	[0.000]	[0.000]	
Pension income	-0.140	-0.141	0.011	0.646***	7.526
	[0.137]	[0.136]	[0.874]	[0.000]	
Impact on mortality					
Dying before 65	-0.008***	-0.009***	-0.009***	-0.009***	0.051
	[0.001]	[0.001]	[0.001]	[0.000]	
Dying before 70	-0.026***	-0.029***	-0.016**	-0.014**	0.257
	[0.001]	[0.000]	[0.002]	[0.004]	
Dying before 75	-0.022**	-0.029***	-0.011**	-0.008*	0.519
	[0.029]	[0.001]	[0.020]	[0.088]	
Impact on labour supply					
Age at claiming pension	-0.267***	-0.253***	0.024	0.010	63.102
	[0.001]	[0.001]	[0.187]	[0.547]	
Obs	401,932	401,932	401,932	401,932	401,932
C.Y. FE	✓	✓	✓	✓	-
Cohort FE		✓	✓	✓	-
Controls			✓	✓	-
Income w/o subsidy				✓	-

Bootstrapped p-values in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Back

» Effects of eligibility (DID)

	1932-1942			1932-1948		
aep_i	0.45 - 1.05	0.45 - 1.05	0.6 - 0.9	0.45 - 1.05	0.45 - 1.05	0.6 - 0.9
35 c.y.	yes	no	yes	yes	no	yes
	(1)	(2)	(3)	(4)	(5)	(6)
First stage						
Recipient	0.730***	0.741***	0.667***	0.722***	0.732***	0.653***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Subsidy	0.646***	0.660***	0.354***	0.610***	0.622***	0.338***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Impact on mortality						
Dying before 65	-0.009***	-0.008***	-0.006***	-0.009***	-0.008***	-0.006***
	[0.000]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Dying before 70	-0.014**	-0.014**	-0.013**	-0.011**	-0.011**	-0.009**
	[0.004]	[0.007]	[0.010]	[0.011]	[0.015]	[0.043]
Dying before 75	-0.008*	-0.007	-0.005	-0.008**	-0.008*	-0.005
	[0.088]	[0.102]	[0.355]	[0.045]	[0.054]	[0.277]
Impact on labour supply						
Age at claiming pension	0.010	0.016	-0.001	0.009	0.014	-0.001
	[0.547]	[0.451]	[0.875]	[0.535]	[0.440]	[0.947]
Obs	401,932	387,027	216,320	464,444	447,740	250,294
C.Y. FE	✓	✓	✓	✓	✓	✓
Cohort FE	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓

Bootstrapped p-values clustered by birth cohorts in brackets. *** p<0.01, ** p<0.05, * p<0.1.

» Event study: probability of being recipient

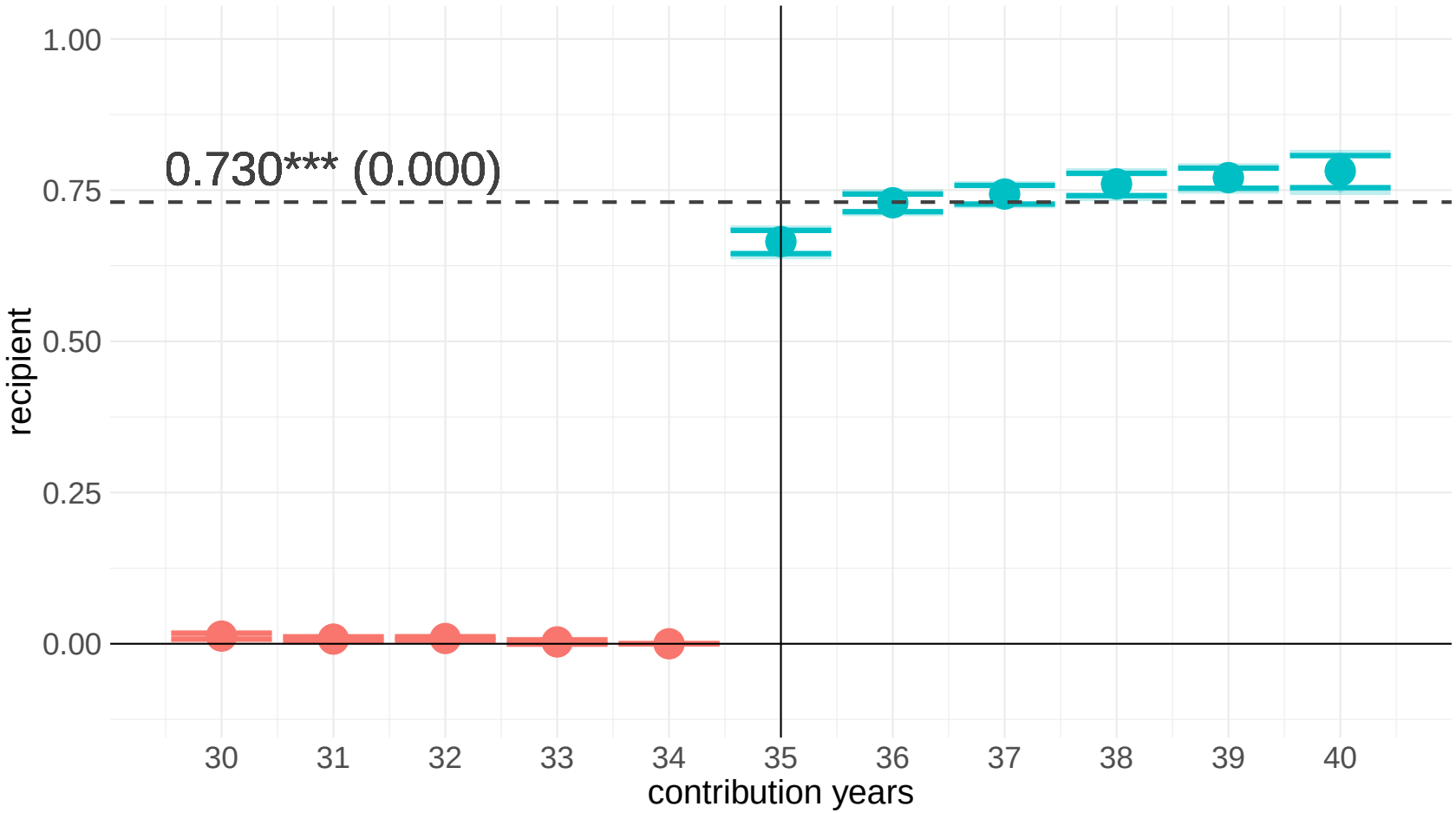

Figure 10: Effects of eligibility on probability of being recipient. *Source: RTWF.*

▷ Back

» Event study: age at claiming pension

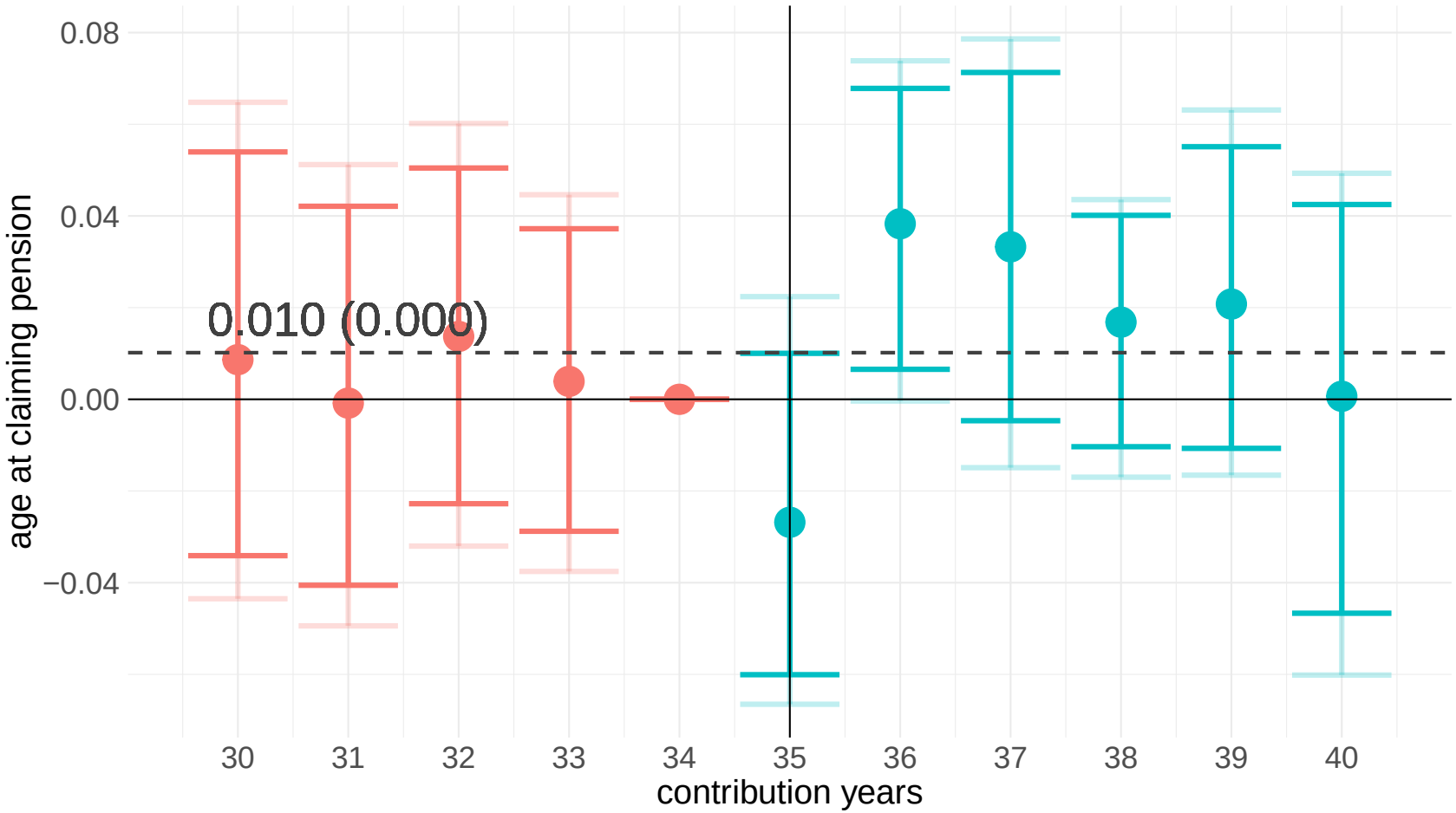

Figure 11: Effect on *age at claiming pension*. *Source: RTWF.*

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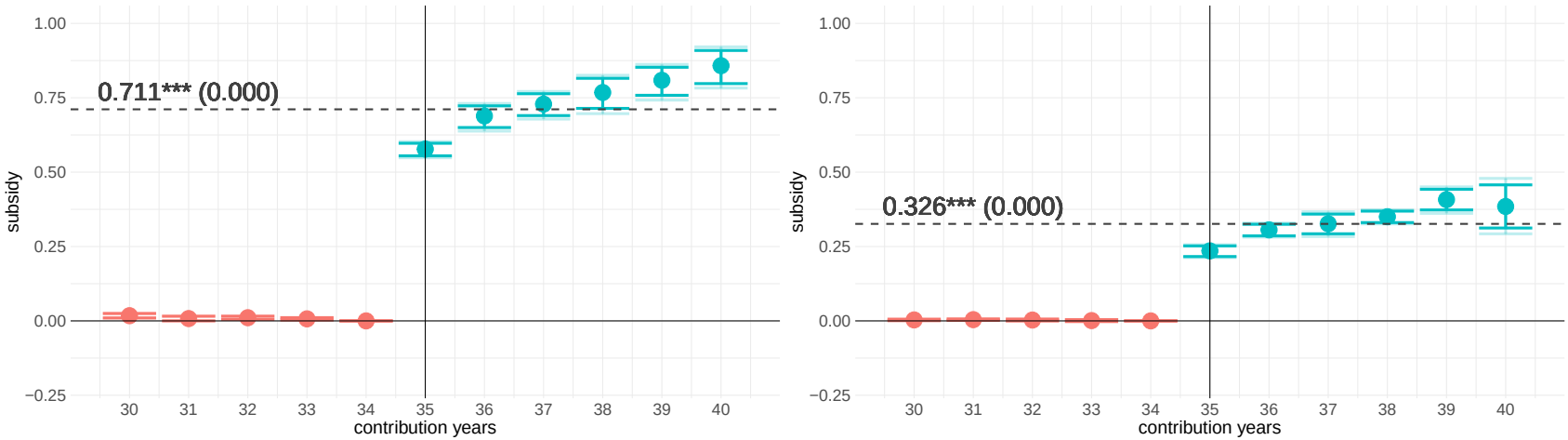
» Event study: subsidy amount



(a) Females (b) Males

Figure 12: Effects of eligibility on subsidy amount (in hundred euro) by gender. *Source: RTWF.*

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» Heterogeneity

DiD heterogeneity analysis by:

- ↪ gender: stronger effects for men; ▷
- ↪ marital status: no strong difference; ▷
- ↪ children (women only): no strong difference; ▷
- ↪ disability pension: stronger effects for claimants. ▷

▷ Back

» Heterogeneity: gender

	All	Women	Men
	(1)	(2)	(3)
First stage			
Recipient	0.730***	0.754***	0.499***
	(0.008)	(0.006)	(0.006)
	[0.000]	[0.000]	[0.000]
Subsidy	0.646***	0.711***	0.326***
	(0.021)	(0.019)	(0.011)
	[0.000]	[0.000]	[0.000]
Impact on mortality			
Dying before 65	-0.009***	-0.004**	-0.004
	(0.001)	(0.002)	(0.002)
	[0.000]	[0.038]	[0.103]
Dying before 70	-0.014**	-0.004	-0.021**
	(0.004)	(0.004)	(0.007)
	[0.004]	[0.249]	[0.014]
Dying before 75	-0.008*	-0.001	-0.014**
	(0.004)	(0.006)	(0.005)
	[0.088]	[0.876]	[0.034]
Impact on labour supply			
Age at claiming pension	0.010	-0.001	-0.039**
	(0.015)	(0.016)	(0.015)
	[0.547]	[0.958]	[0.033]
Obs	401,932	249,822	152,110
C.Y. and cohort FE	✓	✓	✓
Controls	✓	✓	✓

Standard errors clustered by birth cohorts in parenthesis.
Bootstrapped p-values in brackets.
*** p<0.01, ** p<0.05, * p<0.1.

▷ Back

» Heterogeneity: marital status

	Baseline	Married	Not married
	(1)	(2)	(3)
First stage			
Recipient	0.730***	0.693***	0.789***
	[0.000]	[0.000]	[0.000]
Subsidy	0.646***	0.630***	0.629***
	[0.000]	[0.000]	[0.000]
Impact on mortality			
Dying before 65	-0.009***	-0.007**	-0.010**
	[0.000]	[0.003]	[0.005]
Dying before 70	-0.014**	-0.015***	-0.012*
	[0.004]	[0.001]	[0.054]
Dying before 75	-0.008*	-0.010**	-0.002
	[0.088]	[0.050]	[0.773]
Impact on labour supply			
Age at claiming pension	0.010	0.018	0.022
	[0.547]	[0.318]	[0.221]
Obs	401,932	238,362	141,198
C.Y. and cohort FE	✓	✓	✓
Controls	✓	✓	✓

Bootstrapped p-values in brackets.
*** p<0.01, ** p<0.05, * p<0.1.

▷ Back ▷ Women ▷ Children

» Heterogeneity: Women by marital status

	Baseline	Married	Not married
	(1)	(2)	(3)
First stage			
Recipient	0.754***	0.727***	0.798***
	[0.000]	[0.000]	[0.000]
Subsidy	0.711***	0.696***	0.690***
	[0.000]	[0.000]	[0.000]
Impact on mortality			
Dying before 65	-0.004**	-0.004**	-0.004
	[0.038]	[0.040]	[0.189]
Dying before 70	-0.004	-0.008**	0.000
	[0.249]	[0.015]	[0.998]
Dying before 75	-0.001	-0.003	0.005
	[0.876]	[0.660]	[0.617]
Impact on labour supply			
Age claim current	-0.001	0.026	-0.026
	[0.958]	[0.278]	[0.145]
Obs	249,822	145,287	87,310
C.Y. and cohort FE	✓	✓	✓
Controls	✓	✓	✓

Bootstrapped p-values clustered by birth cohorts in brackets.
*** p<0.01, ** p<0.05, * p<0.1.

▷ Back

» Heterogeneity: Women by children

	Baseline (1)	Children (2)	No children (3)
First stage			
Recipient	0.754***	0.737***	0.825***
	[0.000]	[0.000]	[0.000]
Subsidy	0.711***	0.699***	0.791***
	[0.000]	[0.000]	[0.000]
Impact on mortality			
Dying before 65	-0.004**	-0.004*	-0.004
	[0.038]	[0.079]	[0.503]
Dying before 70	-0.004	-0.005	0.001
	[0.249]	[0.232]	[0.884]
Dying before 75	-0.001	-0.001	-0.004
	[0.876]	[0.919]	[0.839]
Impact on labour supply			
Age claim current	-0.001	0.006	0.001
	[0.958]	[0.774]	[0.977]
Obs	249,822	215,577	34,245
C.Y. and cohort FE	✓	✓	✓
Controls	✓	✓	✓

Bootstrapped p-values clustered by birth cohorts in brackets.
*** p<0.01, ** p<0.05, * p<0.1.

▷ Back

» Heterogeneity: disability pension

	Baseline	Disability	No disab.
	(1)	(2)	(3)
First stage			
Recipient	0.730***	0.648***	0.737***
	[0.000]	[0.000]	[0.000]
Subsidy	0.646***	0.509***	0.662***
	[0.000]	[0.000]	[0.000]
Impact on mortality			
Dying before 65	-0.009***	-0.025	-0.004**
	[0.000]	[0.200]	[0.004]
Dying before 70	-0.014**	-0.056**	-0.013**
	[0.004]	[0.003]	[0.003]
Dying before 75	-0.008*	-0.007	-0.010**
	[0.088]	[0.570]	[0.046]
Impact on labour supply			
Age claim current	0.010	0.002	-0.015
	[0.547]	[0.964]	[0.347]
Obs	401,932	53,507	348,425
C.Y. and coh. FE	✓	✓	✓
Controls	✓	✓	✓

Standard errors clustered by birth cohorts in parenthesis.
Bootstrapped p-values in brackets.
*** p<0.01, ** p<0.05, * p<0.1.

▷ Back ▷ Unemployment

» Heterogeneity: unemployment pension

	Baseline (1)	Unemp (2)	No unemp (3)
First stage			
Recipient	0.730***	0.803***	0.723***
	[0.000]	[0.000]	[0.000]
Subsidy	0.646***	0.629***	0.644***
	[0.000]	[0.000]	[0.000]
Impact on mortality			
Dying before 65	-0.009***	0.006	-0.010***
	[0.000]	[0.434]	[0.000]
Dying before 70	-0.014**	-0.011	-0.015**
	[0.004]	[0.356]	[0.004]
Dying before 75	-0.008*	-0.007	-0.008*
	[0.088]	[0.433]	[0.096]
Impact on labour supply			
Age claim current	0.010	0.045	-0.007
	[0.547]	[0.223]	[0.655]
Obs	401,932	30,680	371,252
C.Y. and coh. FE	✓	✓	✓
Controls	✓	✓	✓

Bootstrapped p-values clustered by birth cohorts in brackets.
*** p<0.01, ** p<0.05, * p<0.1.

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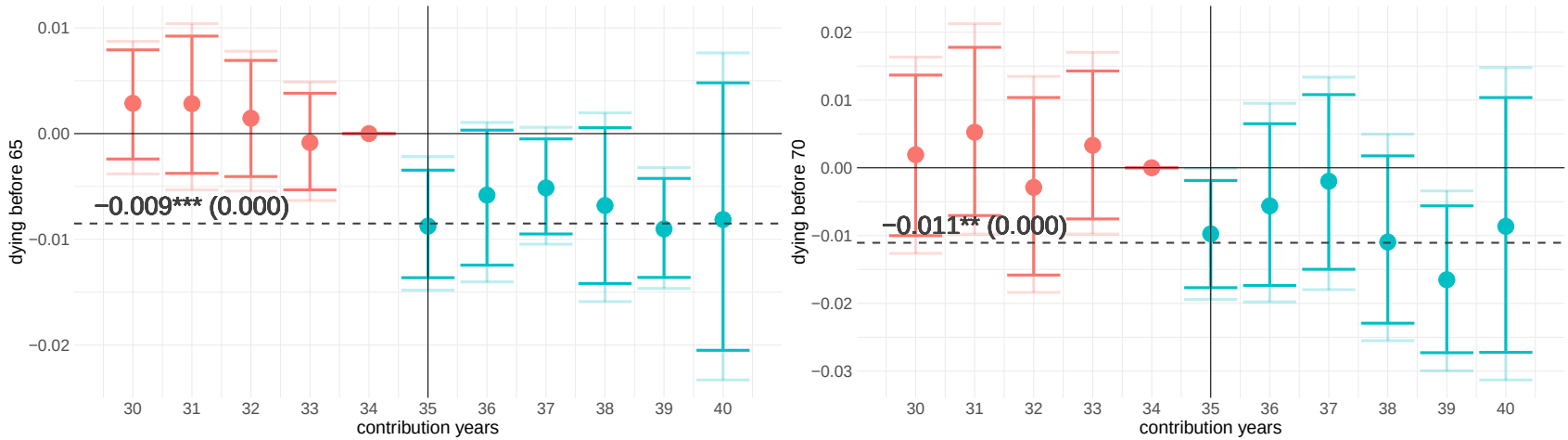
» Robustness: 1932-1948 sample



(a) Dying before 65 (b) Dying before 70

Figure 13: Event study results for the 1932-1948 sample. *Source: RTWF.*

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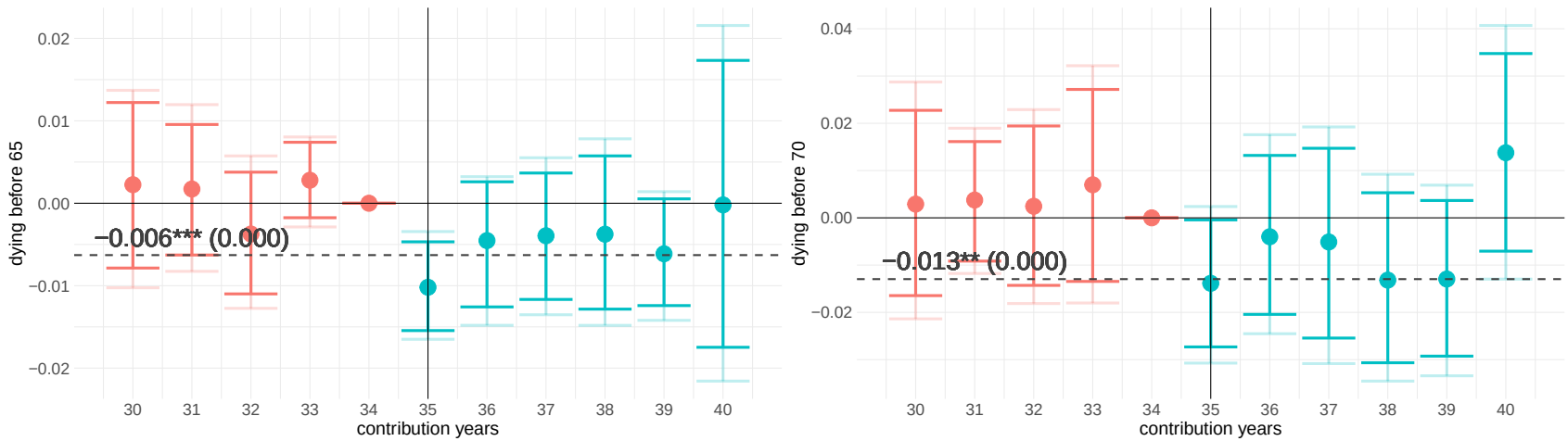
» Robustness: 0.6-0.9 aep sample



(a) Dying before 65

(b) Dying before 70

Figure 14: Event study results for the 0.6-0.9 aep_i sample. *Source: RTWF.*

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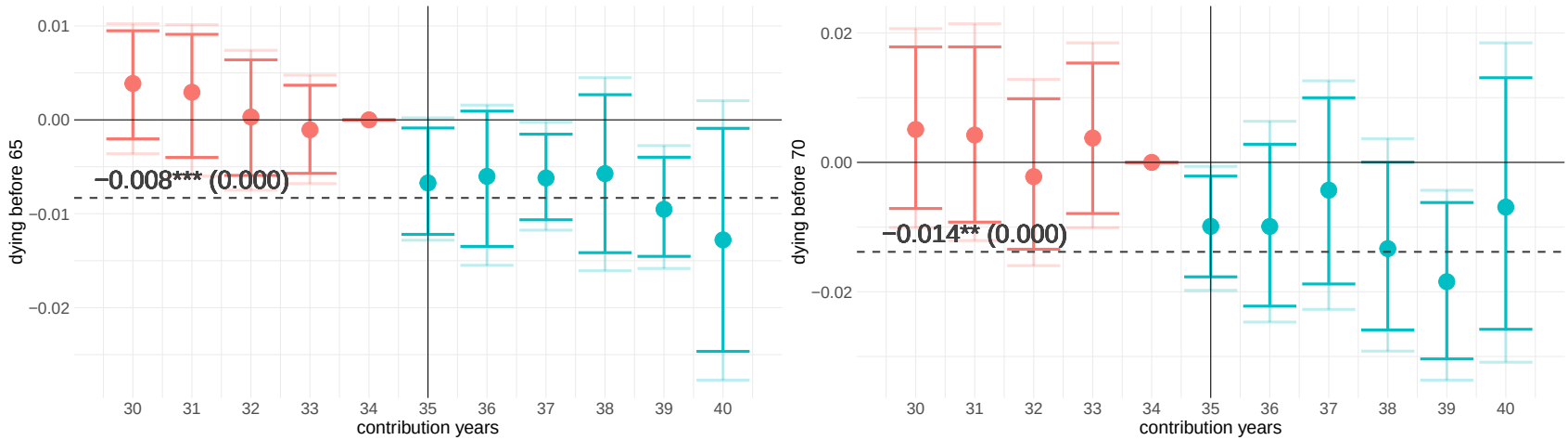
» Robustness: exclude retirees at 420 months



(a) Dying before 65

(b) Dying before 70

Figure 15: Event study results for the baseline sample, excluding retirees at exactly 35 years of contribution (420 months). *Source: RTWF.*

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» Robustness: semester bins

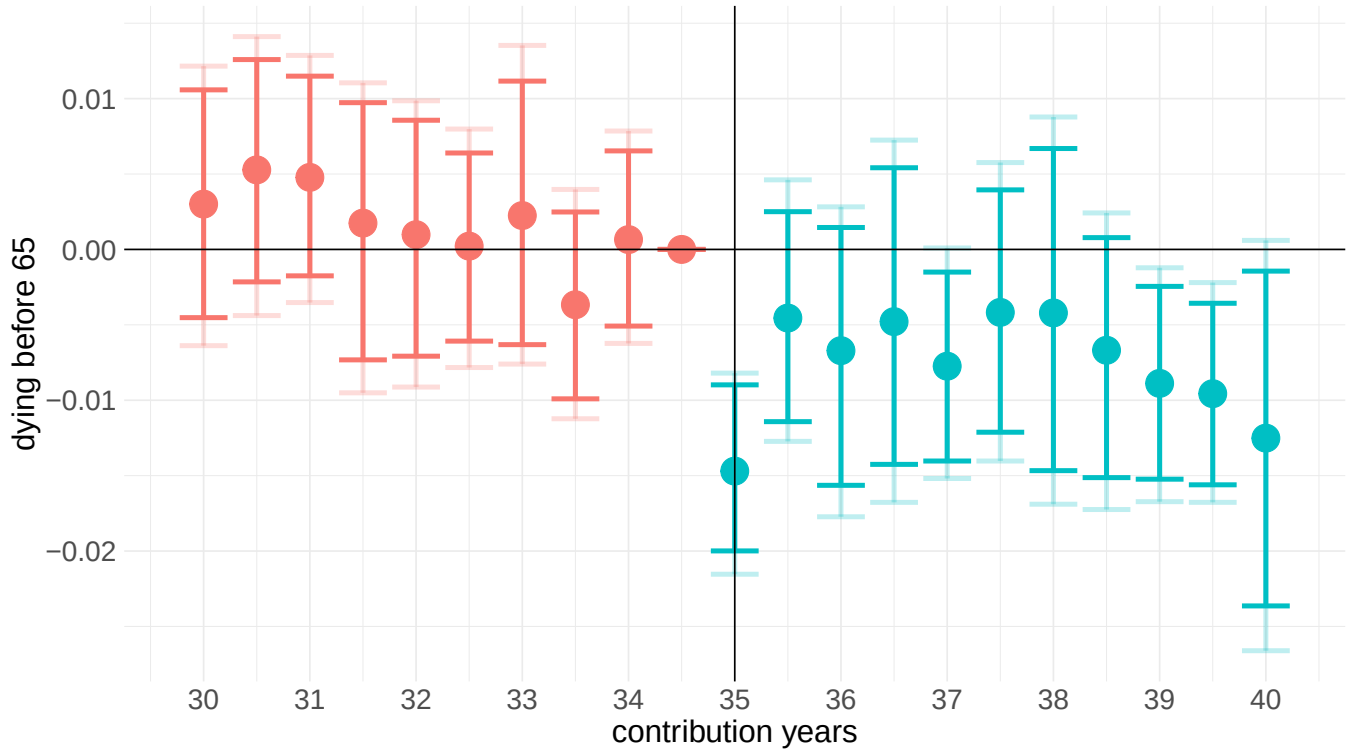

Figure 16: Event study results on the probability of dying before 65 in the baseline sample with semester-wide bins. *Source: RTWF.*

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» Robustness: semester bins (cont.)

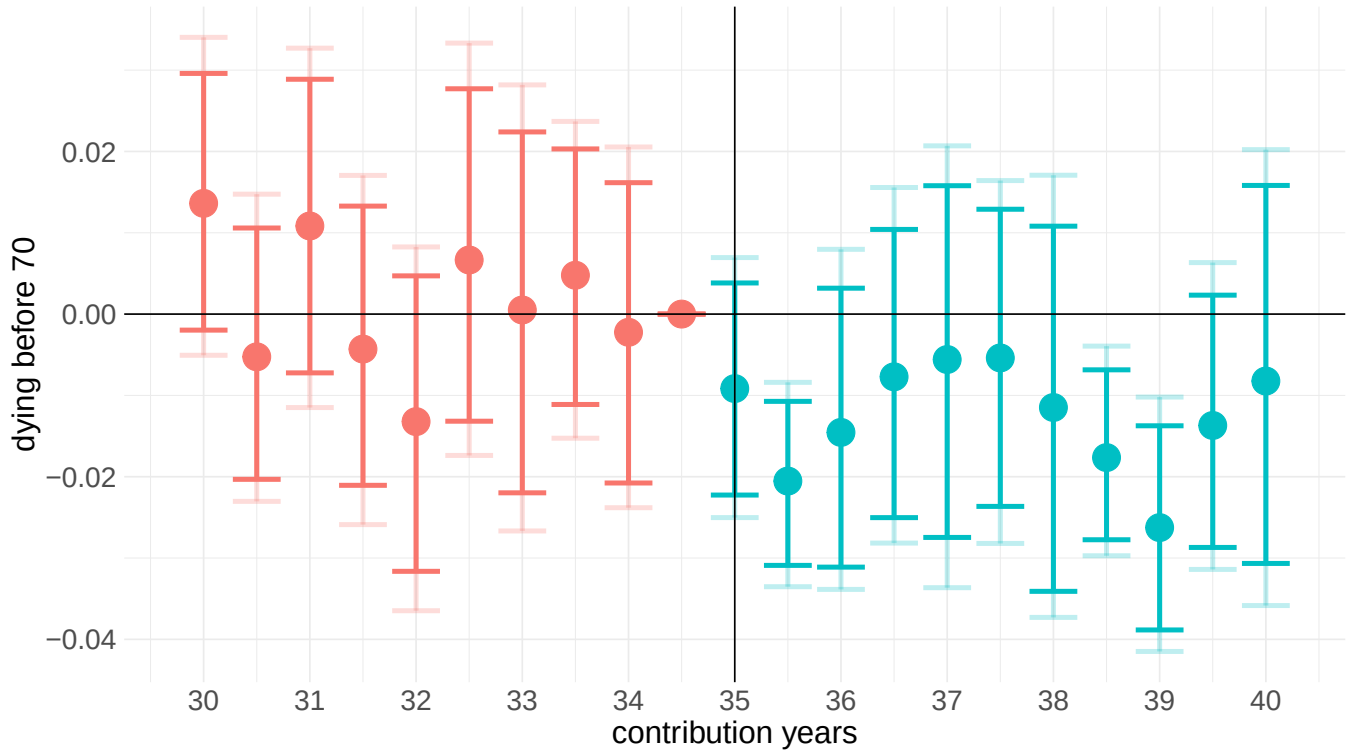

Figure 17: Event study results on the probability of dying before 70 in the baseline sample with semester-wide bins. *Source: RTWF.*

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» Robustness: semester bins (cont.)

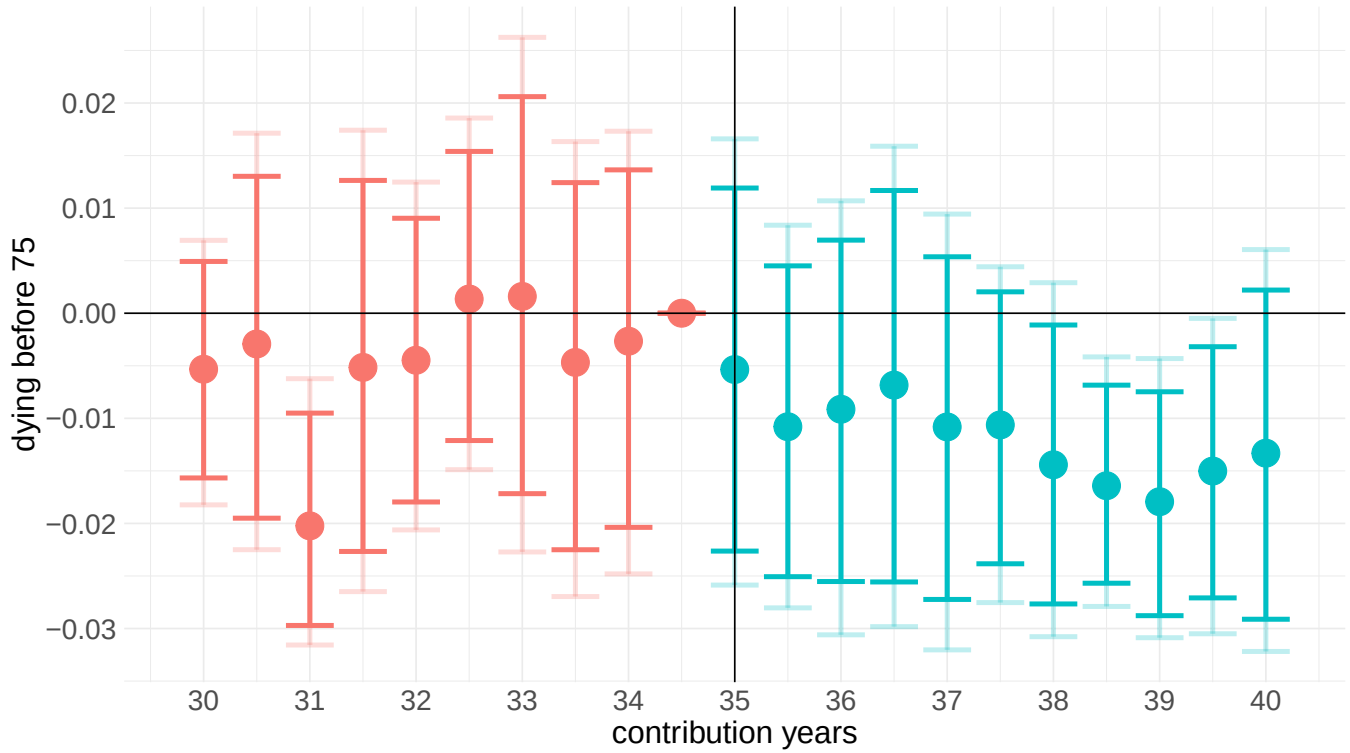

Figure 18: Event study results on the probability of dying before 75 in the baseline sample with semester-wide bins. *Source: RTWF.*

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» Placebo: 1922-1931 sample

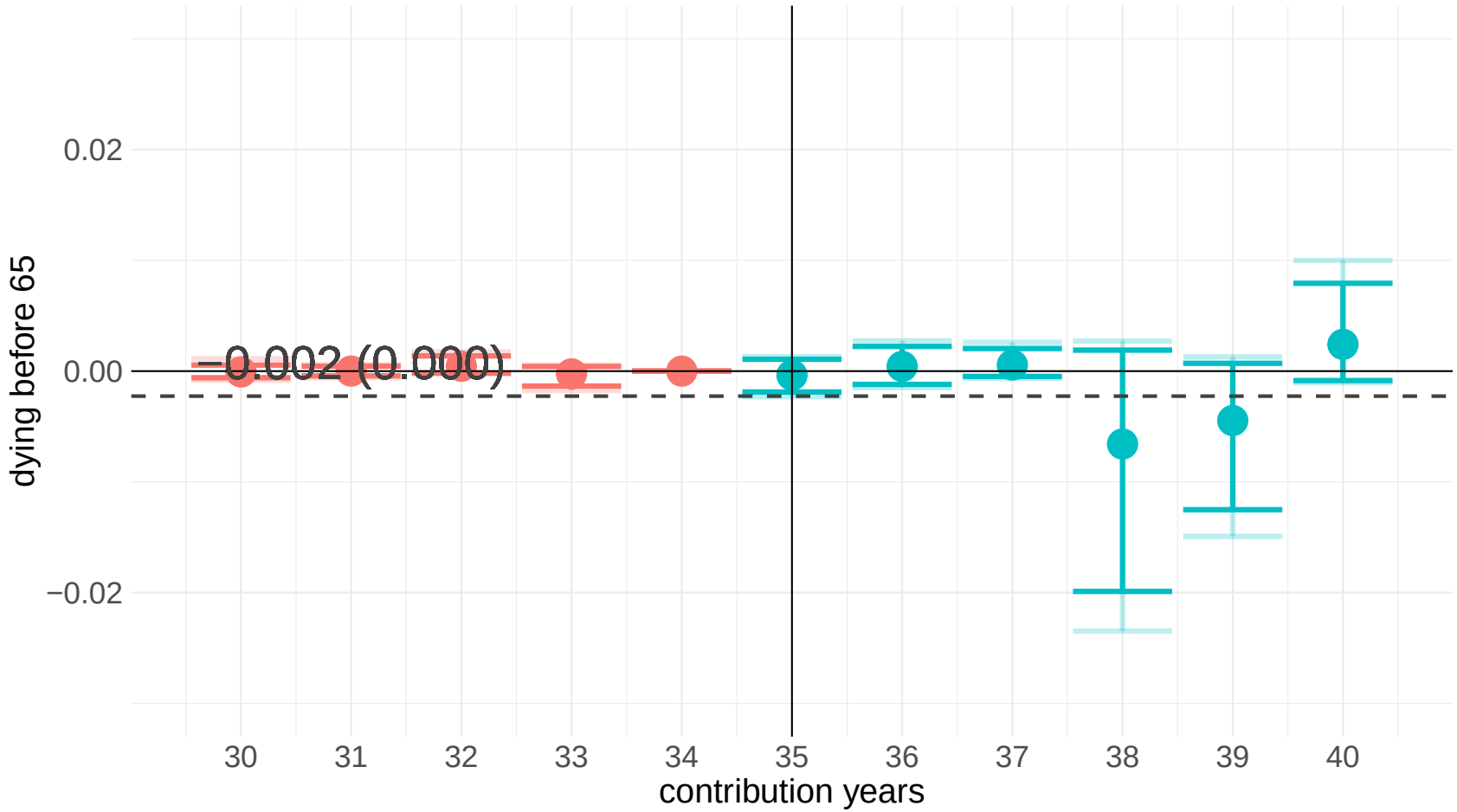

Figure 19: Event study results on probability of dying before 65 for the 1922-1931 placebo sample. *Source: RTWF.*

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» Placebo: 1922-1931 sample (cont.)

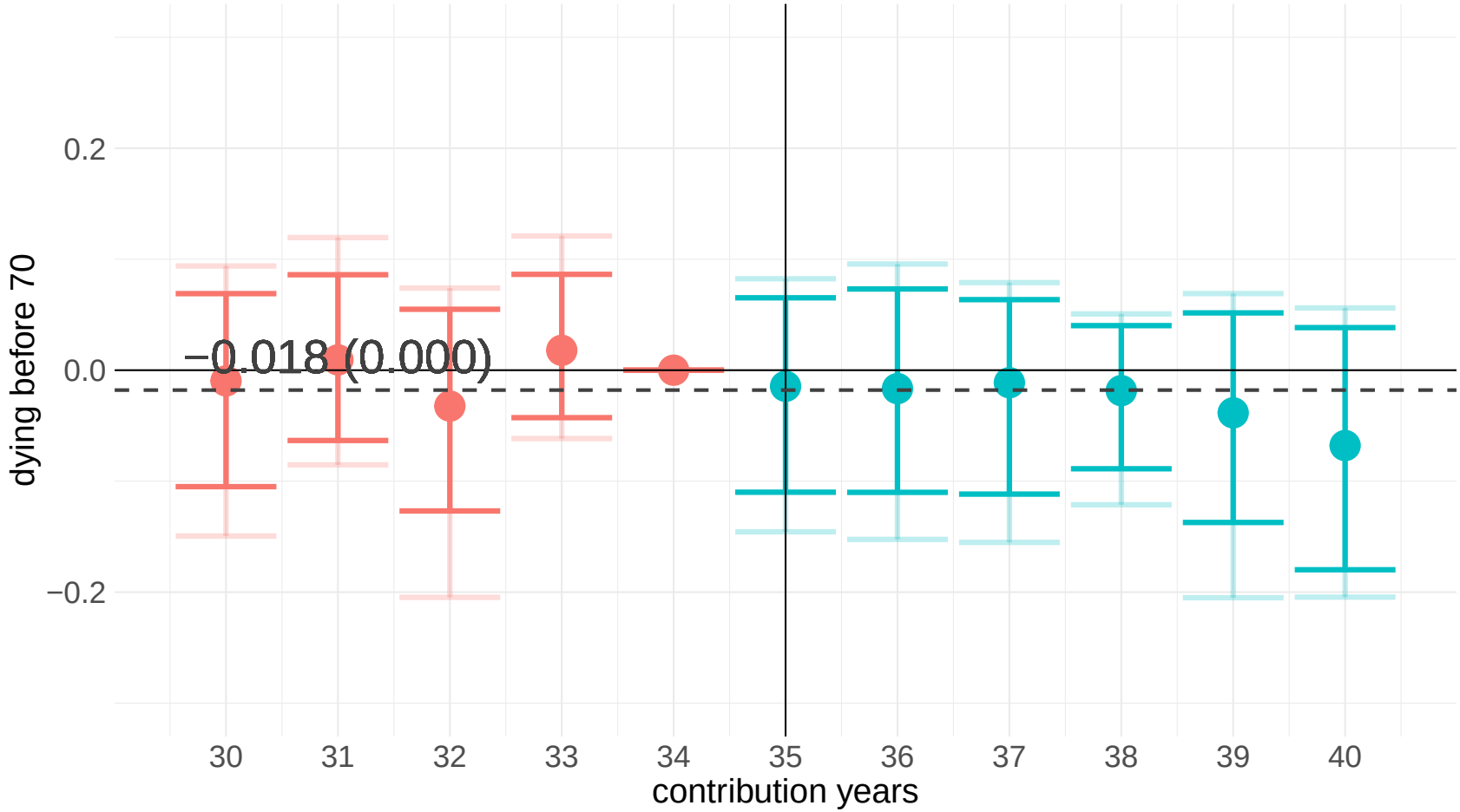


Figure 20: Event study results on probability of dying before 70 for the 1922-1931 placebo sample. *Source: RTWF.*

» Placebo: 1922-1931 sample (cont.)

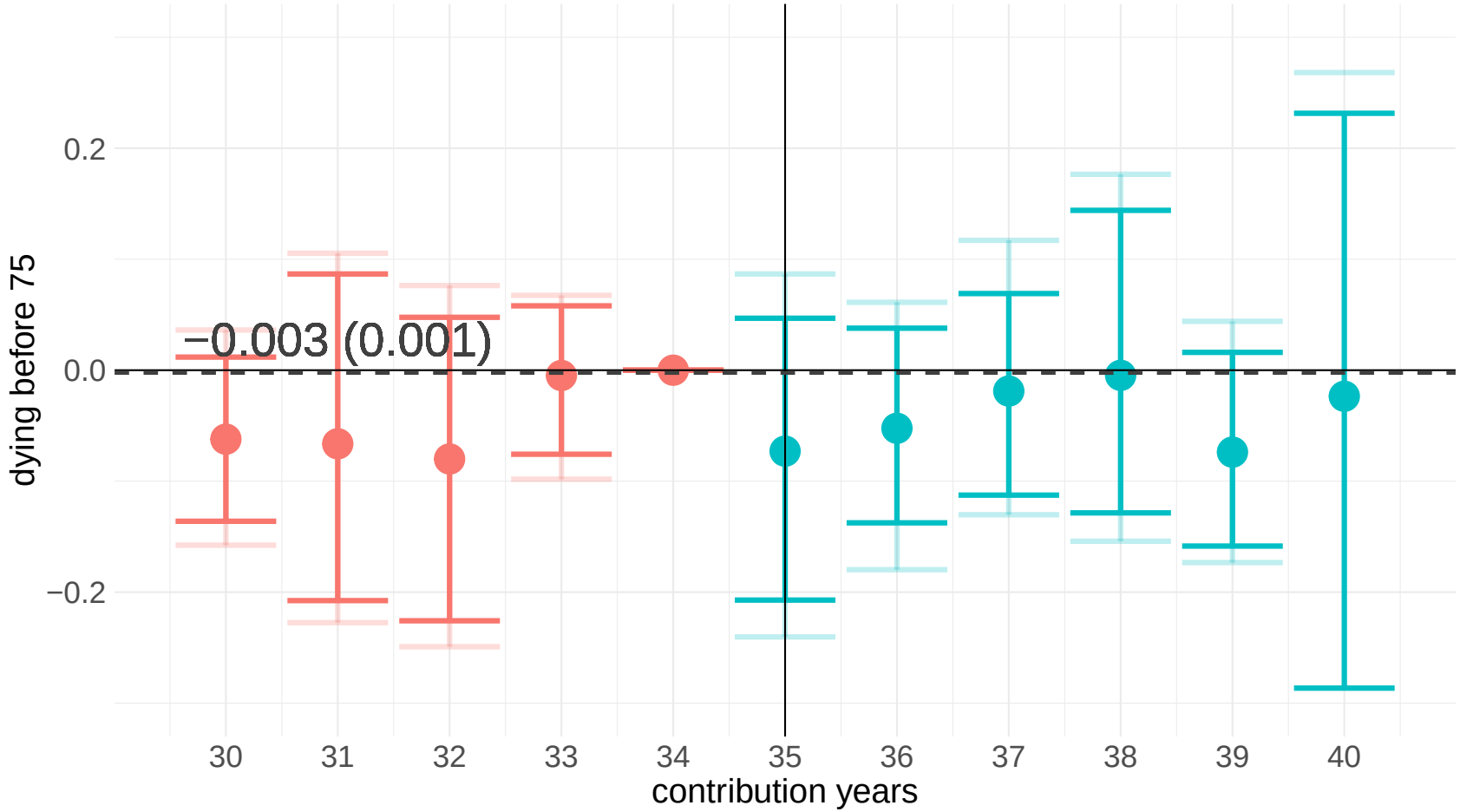
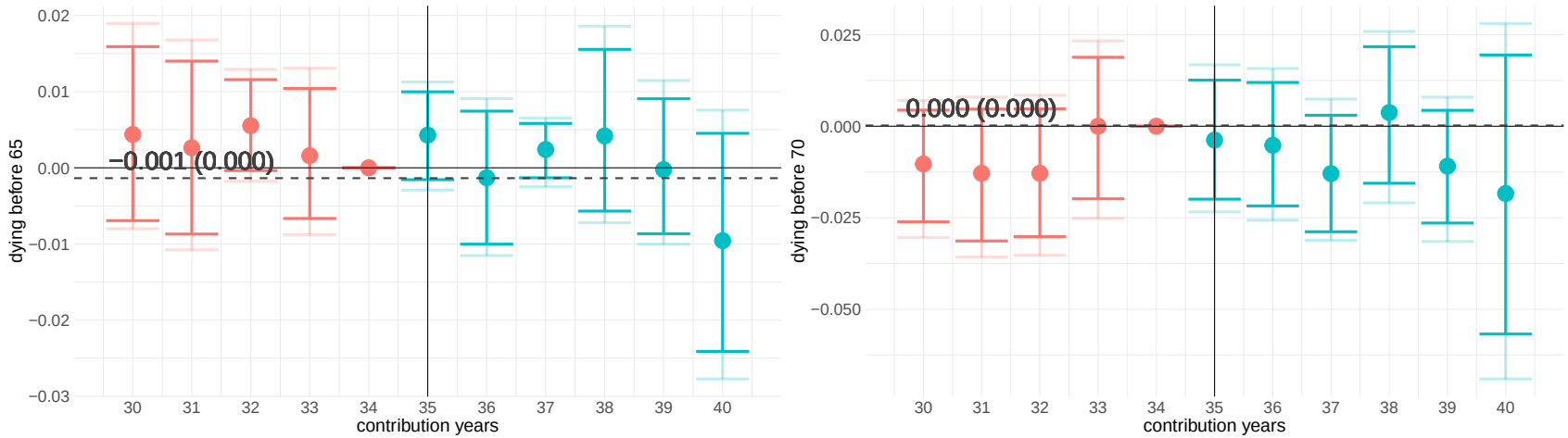


Figure 21: Event study results on probability of dying before 75 for the 1922-1931 placebo sample. *Source: RTWF.*

» Placebo: aep 0.8-1.25 sample



(a) Dying before 65 (b) Dying before 70

Figure 22: Event study results for the aep_i 0.8-1.25 placebo sample. Placebo cutoff at $aep_i = 1$. *Source: RTWF.*

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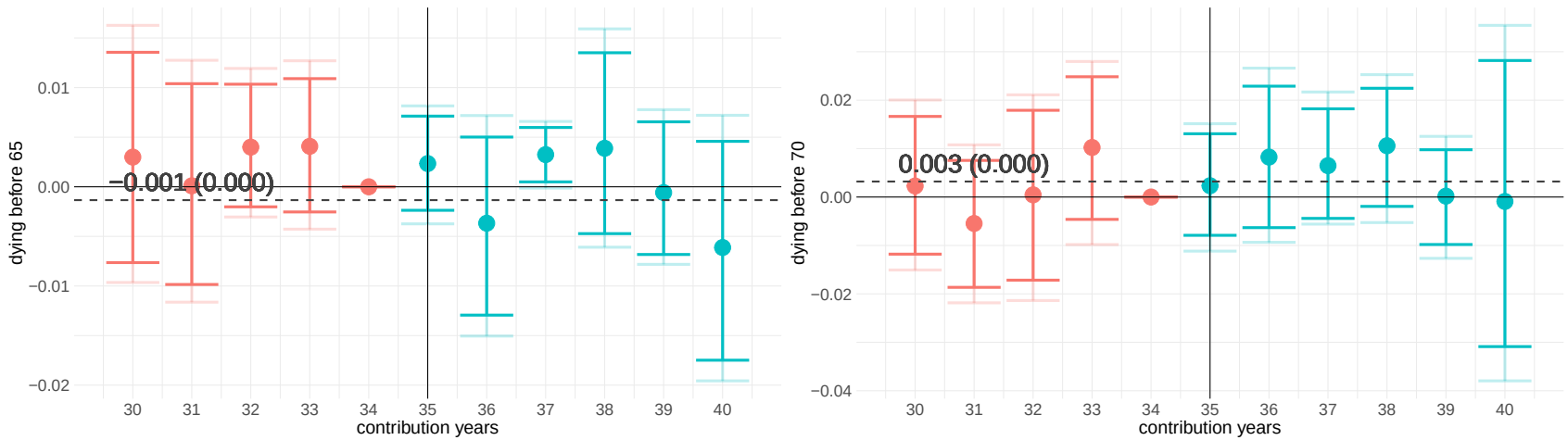
» Placebo: aep above 0.8 sample



(a) Dying before 65 (b) Dying before 70

Figure 23: Event study results for the $aep_i > 0.8$ placebo sample. Placebo cutoff at median aep_i. *Source: RTWF.*

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» Effects of additional pension income (IV)

First stage:

$$PB_{ieg} = \phi_0 + \phi_1(D_e \times After_g) + \phi_3 D_e + \phi_4 X_{ieg} + \lambda_c + \tau_g + \eta_{ieg} \quad (5)$$

where PB_{ieg} indicates pension income.

ϕ_1 measures the ATE of eligibility on pension income.

Second stage:

$$Y_{ieg} = \kappa_0 + \kappa_1 \widehat{PB_{ieg}} + \kappa_2 After_g + \kappa_3 D_e + \kappa_4 X_{ieg} + \lambda_c + \tau_g + \xi_{ieg} \quad (6)$$

where $\widehat{PB_{ieg}}$ are the fitted values from the first stage.

κ_1 captures the impact of additional 100€/month in pension income.

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» IV: effects on mortality and labour supply

	All	Women	Men	Mean
	(1)	(2)	(3)	(4)
First stage				
Pension income	0.646***	0.711***	0.326***	7.526
(instr.=eligible)	(0.021)	(0.019)	(0.011)	
IV				
Impact on mortality				
Dying before 65	-0.012***	-0.005*	-0.012*	0.055
	[0.001]	[0.050]	[0.071]	
Dying before 70	-0.021**	-0.007	-0.060**	0.319
	[0.003]	[0.187]	[0.012]	
Dying before 75	-0.013**	-0.003	-0.039**	0.601
	[0.046]	[0.693]	[0.028]	
Impact on labour supply				
Age at claiming pension	0.030	0.007	-0.038	63.682
	[0.373]	[0.823]	[0.375]	
First stage F-stat	905.920	1335.960	886.470	-
Obs	401,790	249,752	152,038	-
C.Y. and coh. FE	✓	✓	✓	-
Controls	✓	✓	✓	-
Age at claiming pension	✓	✓	✓	-

Standard errors clustered by parenthesis. Bootstrapped p-value in brackets.
*** p<0.01, ** p<0.05, * p<0.1.

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» IV: effects on mortality and labour supply

	All		Female		Male		Mean
	(1)	(2)	(3)	(4)	(5)	(6)	
First stage							
Pension income	0.646***	0.646***	0.711***	0.711***	0.326***	0.326***	7.526
(instr.=eligible)	(0.021)	(0.021)	(0.019)	(0.019)	(0.011)	(0.011)	
IV							
Dying before 65	-0.013**	-0.012***	-0.005*	-0.005*	-0.011	-0.012*	0.055
	(0.002)	(0.002)	(0.002)	(0.002)	(0.006)	(0.006)	
	[0.002]	[0.001]	[0.060]	[0.050]	[0.110]	[0.071]	
Dying before 70	-0.022**	-0.021**	-0.007	-0.007	-0.060**	-0.060**	0.319
	(0.005)	(0.005)	(0.005)	(0.005)	(0.018)	(0.018)	
	[0.003]	[0.003]	[0.185]	[0.187]	[0.013]	[0.012]	
Dying before 75	-0.014**	-0.013**	-0.003	-0.003	-0.038**	-0.039**	0.601
	(0.005)	(0.005)	(0.007)	(0.007)	(0.014)	(0.014)	
	[0.040]	[0.046]	[0.688]	[0.693]	[0.030]	[0.028]	
Age at claiming pension	0.030	-	0.007	-	-0.038	-	63.682
	(0.030)	-	(0.030)	-	(0.041)	-	
	[0.373]	-	[0.823]	-	[0.375]	-	
First stage F-stat	906.940	905.920	1,340.570	1,335.960	887.810	886.470	
Obs	401,932	401,790	249,822	249,752	152,110	152,038	
C.Y. FE	✓	✓	✓	✓	✓	✓	-
Birth cohort FE	✓	✓	✓	✓	✓	✓	-
Controls	✓	✓	✓	✓	✓	✓	-
Age at claiming pension		✓		✓		✓	-

Baseline sample. Monetary values in hundred 2015 Euro. Standard errors clustered by birth cohorts in parenthesis.
Bootstrapped p-values clustered by birth cohorts in brackets.
*** $p<0.01$, ** $p<0.05$, * $p<0.1$.

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» Mechanism: effects on health outcomes

	All	Women	Men
	(1)	(2)	(3)
First stage			
Pension income	0.437***	0.435***	0.587***
(instr.=eligible)	(0.036)	(0.043)	(0.075)
IV			
CASP	0.450**	-0.146	1.198**
	(0.220)	(0.262)	(0.415)
Self-perceived health	0.254	-0.478*	1.619***
	(0.227)	(0.272)	(0.457)
Depression	-0.284	0.425	-0.648*
	(0.219)	(0.279)	(0.335)
Chronic diseases	-0.421*	0.175	-1.773***
	(0.222)	(0.251)	(0.522)
First stage F-stat	142.765	97.504	62.025
Obs	2,328	1,365	963
C.Y and cohort FE	✓	✓	✓
Controls	✓	✓	✓
Retirement age	✓	✓	✓

SHARE-RV baseline sample.
Coefficients in standard deviations from the mean.
Robust standard errors in parenthesis.
*** p<0.01, ** p<0.05, * p<0.1.

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» Other health outcomes

	All	Women	Men
	(1)	(2)	(3)
First stage			
Pension income	0.437***	0.435***	0.587***
(instr.=eligible)	(0.036)	(0.043)	(0.075)
IV			
Has chronic lung disease	-0.203**	-0.107	-0.533***
	(0.064)	(0.072)	(0.155)
Has cataracts	-0.203**	-0.129	-0.244**
	(0.078)	(0.098)	(0.111)
Has high blood pressure	-0.118	0.173	-0.878***
	(0.116)	(0.145)	(0.220)
First stage F-stat	142.765	97.504	62.025
Obs	2,328	1,365	963
C.Y and cohort FE	✓	✓	✓
Controls	✓	✓	✓
Retirement age	✓	✓	✓

SHARE-RV baseline sample. Robust standard errors in parenthesis.
*** p<0.01, ** p<0.05, * p<0.1.

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» Placebo health outcomes

	All	Women	Men
	(1)	(2)	(3)
First stage			
Pension income (instr.=eligible)	0.437***	0.435***	0.587***
	(0.036)	(0.043)	(0.075)
IV			
Has cancer	0.038	-0.026	0.041
	(0.065)	(0.079)	(0.112)
Has diabetes	0.047	0.145	-0.201
	(0.089)	(0.100)	(0.175)
Has arthritis	0.008	0.096	-0.196
	(0.092)	(0.123)	(0.121)
Has hip femoral fracture	-0.008	-0.028	-0.141
	(0.035)	(0.036)	(0.101)
First stage F-stat	142.765	97.504	62.025
Obs	2,328	1,365	963
C.Y and cohort FE	✓	✓	✓
Controls	✓	✓	✓
Retirement age	✓	✓	✓

SHARE-RV baseline sample. Robust standard errors in parenthesis.
*** p<0.01, ** p<0.05, * p<0.1.

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» Mechanism: optimism and financial constraints

	All	Women	Men
	(1)	(2)	(3)
First stage			
Pension income	0.437***	0.435***	0.587***
(instr.=eligible)	(0.036)	(0.043)	(0.075)
IV			
Lack of money stops	-0.334	-0.225	-0.902**
	(0.233)	(0.281)	(0.440)
Feel full of opportunities	0.529**	-0.087	1.285**
	(0.228)	(0.278)	(0.423)
Future looks good	0.466**	0.121	0.880**
	(0.228)	(0.276)	(0.407)
First stage F-stat	142.765	97.504	62.025
Obs	2,328	1,365	963
C.Y. and cohort FE	✓	✓	✓
Controls	✓	✓	✓
Retirement age	✓	✓	✓

SHARE-RV baseline sample.
Coefficients in standard deviations from the mean.
Robust standard errors in parenthesis.
*** p<0.01, ** p<0.05, * p<0.1.

» Mechanism: other outcomes

	All	Women	Men
	(1)	(2)	(3)
First stage			
Pension income	0.437***	0.435***	0.587***
(instr.=eligible)	(0.036)	(0.043)	(0.075)
IV			
Days/week alcohol last 6 months	-0.230	-0.247	-0.968**
(sd from mean)	(0.277)	(0.334)	(0.475)
Prob (smoking)	-0.341**	-0.251*	-0.221
	(0.112)	(0.138)	(0.186)
Prob (Ever smoked daily)	-0.147	-0.110	-0.019
	(0.109)	(0.132)	(0.187)
Difficulties with ADLs	-0.143	0.544*	-1.034**
(sd from mean)	(0.242)	(0.301)	(0.401)
Difficulties with IADLs	-0.443**	0.031	-0.526
(sd from mean)	(0.205)	(0.214)	(0.346)
Obs	2,328	1,365	963
C.Y. and cohort FE	✓	✓	✓
Controls	✓	✓	✓
Retirement age	✓	✓	✓

SHARE-RV baseline sample.
Coefficients in standard deviations from the mean.
Robust standard errors in parenthesis.
*** p<0.01, ** p<0.05, * p<0.1.

» Gender difference: share of pension income

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	Share of pension income over total household income					
	Above 50%			Below 50%		
	All	Women	Men	All	Women	Men
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: First stage						
Pension income (100€)	0.736***	0.854***	0.493***	0.243***	0.173**	0.469***
	(0.108)	(0.119)	(0.170)	(0.059)	(0.074)	(0.106)
Panel B: IV						
CASP	0.729*	0.024	3.808**	0.858	-0.319	2.289***
	(0.372)	(0.374)	(1.744)	(0.701)	(1.131)	(0.855)
Self-reported heatlh	0.056	-1.064***	1.735	0.980	-0.289	2.715***
	(0.334)	(0.382)	(1.125)	(0.757)	(1.241)	(1.029)
Depression index	-0.813**	0.128	-2.048*	-1.125	0.842	-2.228***
	(0.349)	(0.392)	(1.165)	(0.774)	(1.368)	(0.848)
Number of chronic diseases	-0.211	0.360	-1.073	-2.661***	-2.492	-2.478***
	(0.376)	(0.414)	(1.105)	(0.938)	(1.596)	(0.901)
ADLA	-0.058	0.700	0.980	-0.248	0.081	-0.859
	(0.520)	(0.618)	(0.711)	(0.534)	(0.947)	(0.615)
Stroke	-0.055	-0.021	-0.021	-0.004	-0.024	0.122
	(0.070)	(0.081)	(0.103)	(0.103)	(0.201)	(0.085)
Chronical lung disease	-0.098	0.004	-0.145	-0.002	0.076	-0.315*
	(0.110)	(0.119)	(0.239)	(0.149)	(0.270)	(0.188)
Cataracts	-0.053	0.085	-0.423	-0.496*	-0.882	-0.065
	(0.112)	(0.126)	(0.259)	(0.256)	(0.548)	(0.189)
High blood pressure	-0.034	-0.015	0.986	-0.102	0.774	-1.150***
	(0.169)	(0.189)	(0.694)	(0.349)	(0.690)	(0.418)
Low money stops	-0.408	-0.378	-0.022	-1.283*	-1.765	-2.263**
	(0.334)	(0.380)	(0.976)	(0.732)	(1.332)	(0.885)
Life full of opportunities	1.144**	0.721*	2.062	0.635	-0.938	2.202**
	(0.445)	(0.436)	(1.814)	(0.699)	(1.156)	(0.899)
Future looks good	1.031***	0.475	3.656**	0.506	-0.477	1.811**
	(0.388)	(0.415)	(1.709)	(0.699)	(1.224)	(0.868)
Observations	487	199	288	676	470	2062
First stage F-stat	42.2	41.4	7.4	15.7	5.0	15.9

» Gender difference: asset ownership

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	Has assets			Doesn't have assets		
	All (1)	Women (2)	Men (3)	All (4)	Women (5)	Men (6)
Panel A: First stage						
Pension income (100€)	0.378***	0.359***	0.409***	0.500***	0.497***	0.643***
	(0.050)	(0.060)	(0.090)	(0.054)	(0.063)	(0.126)
Panel B: IV						
CASP	0.684**	-0.005	0.608	0.216	-0.495	1.405**
	(0.345)	(0.422)	(0.692)	(0.296)	(0.342)	(0.625)
Self-reported heatlh	0.545	-0.696	2.277**	0.167	-0.212	1.385**
	(0.354)	(0.458)	(0.906)	(0.302)	(0.337)	(0.635)
Depression index	-0.604*	0.237	-1.098*	-0.117	0.480	-0.902*
	(0.336)	(0.447)	(0.654)	(0.305)	(0.364)	(0.526)
Number of chronic diseases	-1.426***	-0.747*	-3.248***	0.266	0.448	-0.994*
	(0.393)	(0.452)	(1.003)	(0.273)	(0.315)	(0.599)
Difficulties with ADLAs	-0.644*	0.006	-1.955**	0.216	0.661	-0.589
	(0.352)	(0.439)	(0.765)	(0.346)	(0.416)	(0.558)
Had a stroke	-0.046	-0.028	0.058	0.038	0.021	0.384**
	(0.054)	(0.072)	(0.085)	(0.065)	(0.062)	(0.153)
Has chronical lung disease	-0.167**	-0.140	-0.321	0.018	0.166*	-0.586***
	(0.085)	(0.105)	(0.220)	(0.077)	(0.088)	(0.207)
Has cataracts	-0.211*	-0.079	-0.379*	-0.171*	-0.173	-0.166
	(0.120)	(0.162)	(0.217)	(0.092)	(0.112)	(0.165)
Has high blood pressure	0.070	0.444*	-1.194***	0.042	0.091	-0.602*
	(0.170)	(0.231)	(0.418)	(0.146)	(0.177)	(0.313)
Lack of money stops	-0.076	-0.057	0.256	-0.554*	-0.330	-0.657
	(0.358)	(0.452)	(0.754)	(0.287)	(0.331)	(0.579)
Feel full of opportunities	0.888**	0.095	1.457*	0.185	-0.355	1.646***
	(0.355)	(0.430)	(0.770)	(0.305)	(0.355)	(0.624)
Future looks good	0.402	-0.046	0.812	0.421	0.021	1.333**
	(0.335)	(0.424)	(0.709)	(0.308)	(0.350)	(0.640)
Observations	1,259	720	539	1,069	645	424
First stage F-stat	56.6	36.2	20.8	87.1	63.0	26.02

» Gender difference: predtermined health

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	Female	Male	Source
Mortality measures			
Age at death (censored)	72.49	72.31	RTWF
Dying before 65	0.06	0.06	RTWF
Dying before 70	0.22	0.24	RTWF
Dying before 75	0.47	0.50	RTWF
Health measures			
CASP	39.62	38.58	SHARE-RV
Self-reported heatlh	1.88	1.53	SHARE-RV
Depression index	2.30	2.14	SHARE-RV
Number of chronic diseases	1.24	1.62	SHARE-RV
ADLA	0.12	0.22	SHARE-RV
Feelings measures			
Low money stops	1.09	1.14	SHARE-RV
Life full of opportunities	2.32	2.11	SHARE-RV
Future looks good	2.25	2.14	SHARE-RV
Risky behaviours			
Consumed alcohol (days/week)	3.41	4.12	SHARE-RV
Smoke currently	0.25	0.22	SHARE-RV
Ever smoked daily	0.45	0.65	SHARE-RV

End of the presentation.