

Widowhood and Its Impact on Well-being and Economic Conditions

FROGEE Economic Policy Seminar *Gender Inequality at Old Age*
Vilnius, 29.10.2024

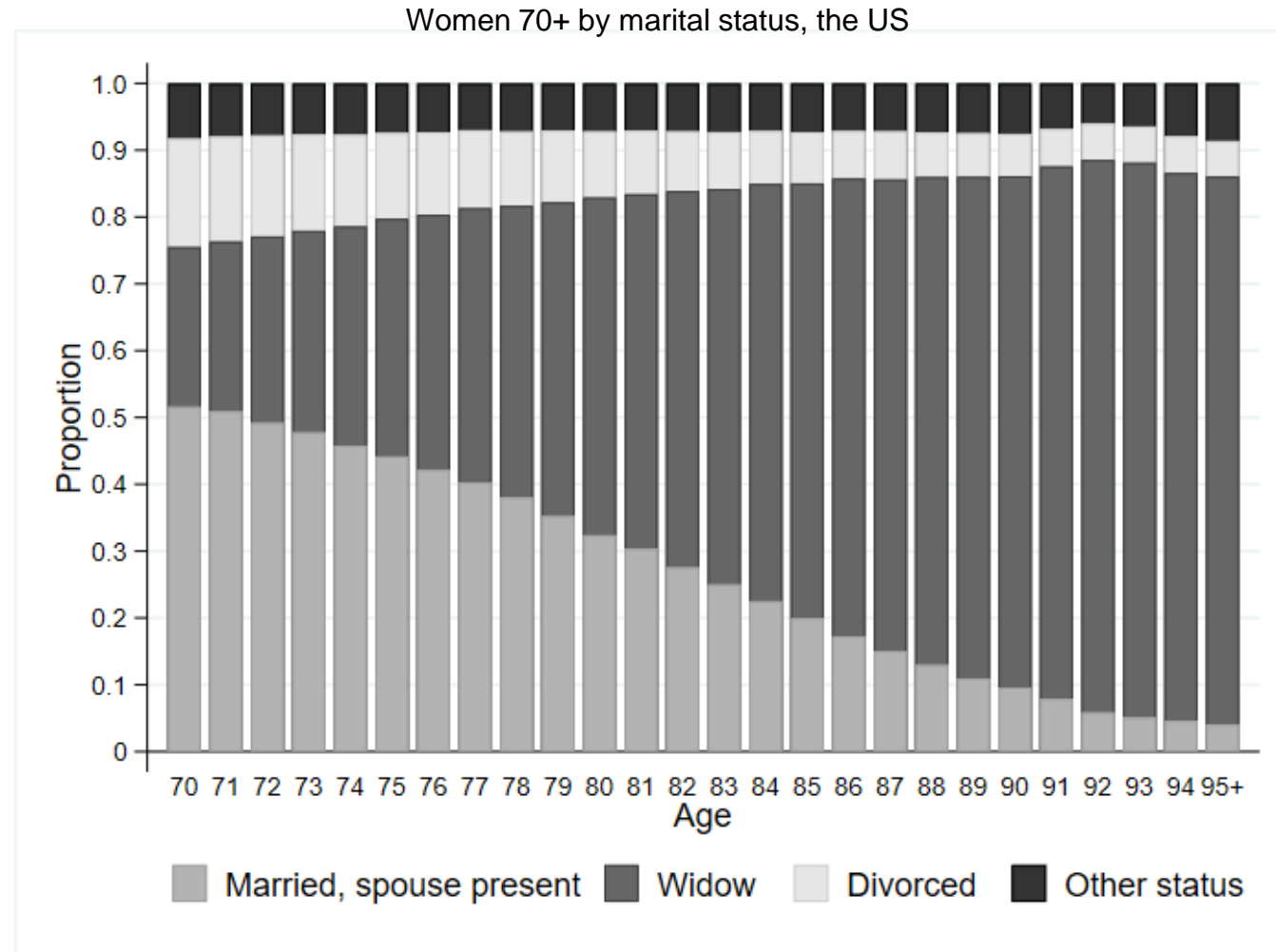
Monika Oczkowska *with Michał Myck*

Centre for Economic Analysis CenEA

(based on studies conducted with Maja Adena, Daniel Hamermesh and Artur Król)

Incidence of widowhood

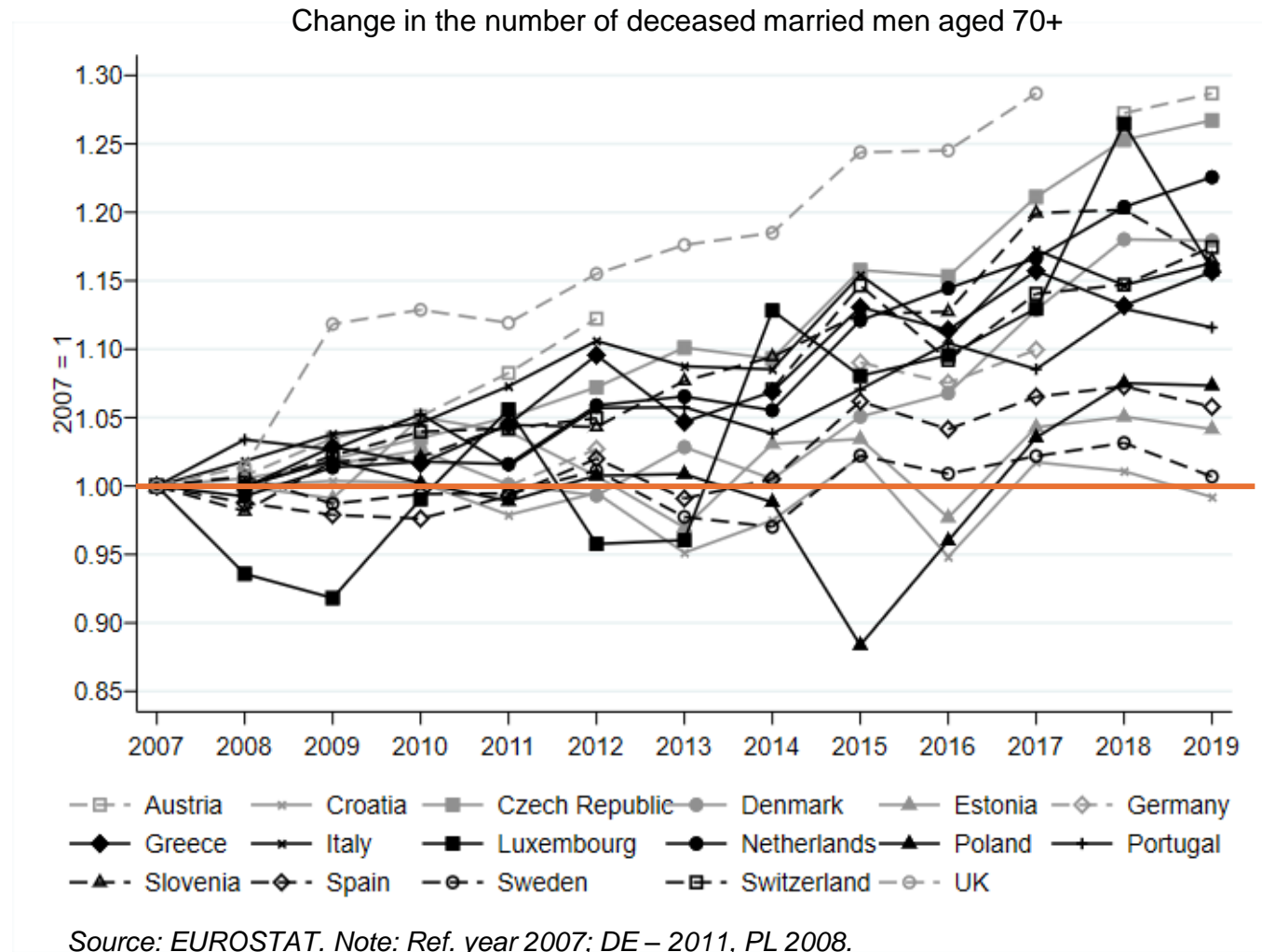
- Widowhood is fate of 50% of those who remain in partnerships in their later life;
- In the US 47% of women 70+ were widows (only 16% of men were widowers);
- About 700K women become widows in the US each year;
- Numbers similar in Europe (DE - 44%, FR – 45%, IT – 51%)
- Even higher in South-East Asia (47% in Japan, 64% in South Korea);
- These numbers grow fast with age.



Source: American Community Survey 2006-2017.

Trends in the incidence of widowhood

- In many countries the number of women who become widows has grown rapidly over the last decade (2007-2019 over 15% in DK, GR, IT, PT; over 20% in AT, CZ, NL);
- These trends reflect increased longevity and coming of age of subsequent, more numerous cohorts („Baby-boomers”);
- Recently the incidence of widowhood and the average lifetime in widowhood grew faster due to the COVID-19 pandemic.



What do we know from the literature?

- Extensive literature in epidemiology and sociology on implications on widowhood (Avis et al. 1991; Spahni et al. 2015; Siflinger 2017; Kristiansen et al. 2019; Luhmann et al. 2012; Bennet & Soulsby, 2012);
- So far limited interest among economists:
 - mainly to calculate adaptation effects to shocks (Clark et al. 2008)
- Limitations:
 - limited outcomes,
 - small samples,
 - limited attempt at identifying potential moderators of reduced health and well-being
- No studies putting together implications of widowhood and time use among widows

Implications of widowhood in our studies

Results drawing on papers:

- Hamermesh, Myck, Oczkowska (2023) Widows' Time: Adjusting to Loss, *Research in Labor Economics* 50, pp. 369-396, doi: 10.1108/S0147-912120230000050016
NBER Working Paper 28752: <https://www.nber.org/papers/w28752>
- Adena, Hamermesh, Myck, Oczkowska (2023) Home Alone: Widows' Well-being and Time, *Journal of Happiness Studies* 24, pp. 813–838, doi: 10.1007/s10902-023-00622-w
IZA Working Paper 14881: <https://www.iza.org/publications/dp/14881>
- Michał Myck, Artur Król, Monika Oczkowska (2024) [Widowhood in Poland: Reforming the Financial Support System](#), FREE Policy Paper April

Overview of the presentation

1. Widowhood and well-being:

- Start with challenges
- Show some results:
 - mental health
 - life satisfaction
 - allocation of time
- End with challenges

2. Some insights into economic consequences of widowhood:

- How to comprehensively evaluate the impact of a policy affecting widowed?

Data as the key challenge

- What are we interested in?

1. Causal effect on well-being of becoming a widow(er)

2. Evolution of this effect over time

- What are the challenges?

- selective population (usually older, „survivors” until certain ages)
- information on the same individuals collected over time (before and after widowhood)
 - preferably over a long time (to understand the evolution)
- social type of survey - information on well-being measures (not collected in admin data!)
- topped with comprehensive background information – causality & possible moderators (what impacts the strength or direction of the relationship btw. widowhood and well-being)

Data as the key challenge

1. Causal effect on well-being of becoming a widow(er)

- widowhood can be thought of as exogenous:
 - women's wellbeing does not determine husband's death
 - unexpected or unpredictable:
 - ✓ „sudden death” vs. terminal illness
- ..but its timing from the perspective of well-being is not:
 - what if women whose partners died early also had overall lower levels of well-being (before and after widowhood)?
 - for identification we therefore require a well-specified reference group
 - and a lot of background information to match it well with the sample of widows
- moreover, widowhood might have an effect on sample selection (with all its consequences)

2. Evolution of this effect over time

- from a data collection perspective, timing of widowhood is highly uncertain (it's hard to plan for it..)
 - big dataset over a long time to have large enough sample of widow(er)s

What data do we use? Longitudinal!

Survey of Health Ageing and Retirement in Europe SHARE (<https://share-eric.eu/>):

- international, but comparable: 19 countries
- focused on older people (50+)
- partner interviewed as well!
- panel – same individuals every two years (waves 1-7 covering 2004-2017)
- relatively large samples (& representative)
- many well-being outcomes (collected consistently over time)
- a lot of additional background information (childhood, life histories, social network)
- end-of life interviews for deceased participants (with surviving spouse/other relative): last months of life

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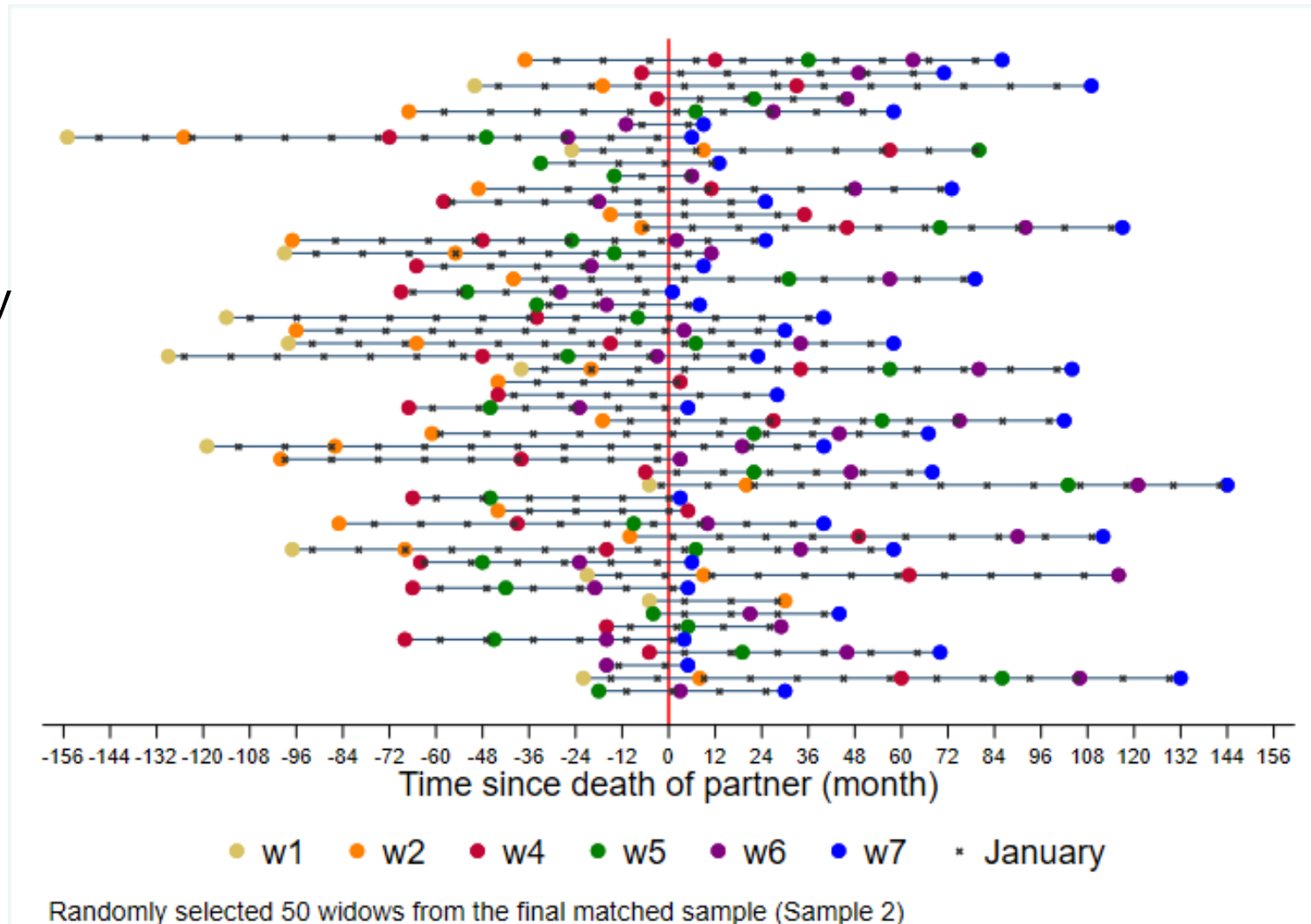
- widowed sample: women observed at least twice in the survey – once prior to death and once after death of a partner – over 3000 women
- reference group: women observed at least twice in the survey continuously married with the same background characteristics as „to-be-widows”

What data do we use? Longitudinal!

Examples from individual participation histories from the point of view of partner's death:

- color points represent specific survey waves
- time 0 = time of partner's death
- x reflects calendar time (January of consecutive years)

50 individual SHARE participation histories



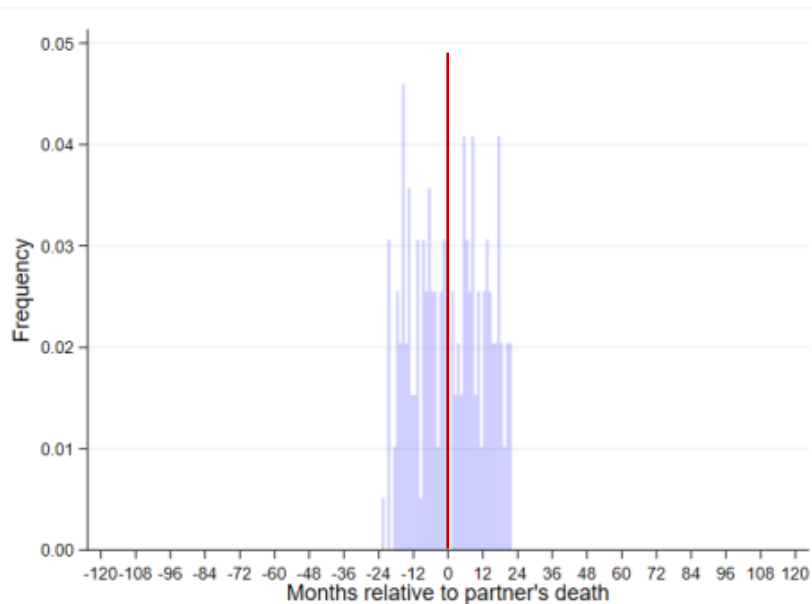
What data do we use? Longitudinal!

- Survey participation relative to the time of partner's death:
 - no specific pattern with the exception of month 0
 - no other discontinuities in survey participation except for time of partner's death
 - among those who did participate

3 subsamples based on time between the first and the last participation:

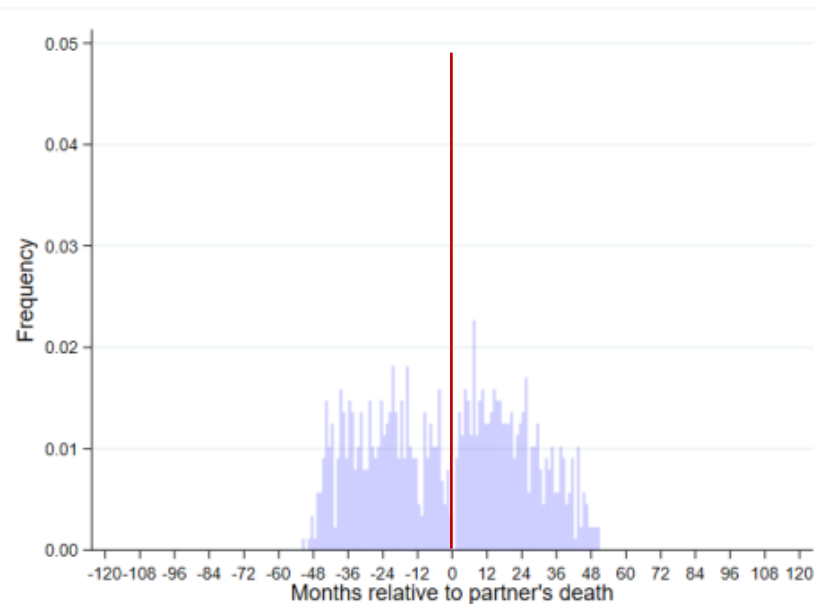
A

0-24 months



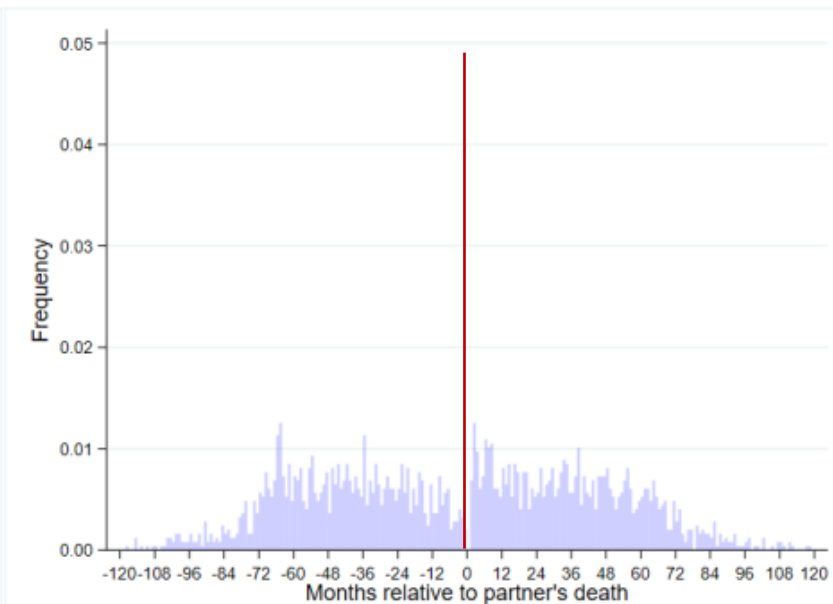
B

25-60 months



C

> 60 months



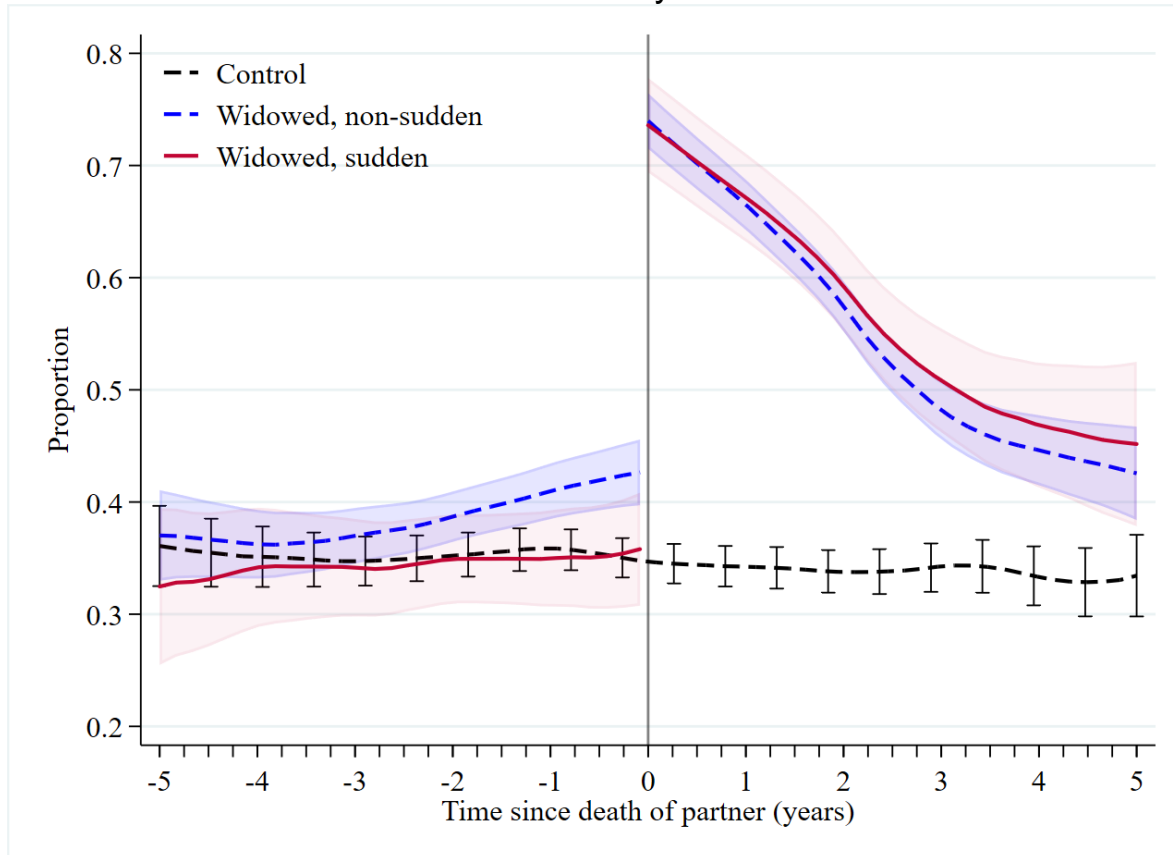
What methods do we use?

- Still-married need to be „identical” as widows except for partner’s death: Matching
 - Propensity Score Matching based on an extensive set of observables:
 - on women and their partners
 - fixed over time (educ, no. children, childhood health) and time varying (pre-widowhood)
 - first stage of exact matching by country
 - imputation of „time of death” for the matched non-widowed women
- 1. Non-parametric estimates of time to widowhood (actual or imputed) on well-being outcomes
- 2. Longitudinal examination of the role of family and social networks:
 - soc. netw. collected only in Wave 4;
 - Wave 4 – Wave 6 analysis – 4 years in-between;
 - participants in Wave 6 conditional on having a partner in Wave 4: compare those who became widows and continuously married
 - how widowhood affects well-being conditional on pre-widowhood characteristics (social network)

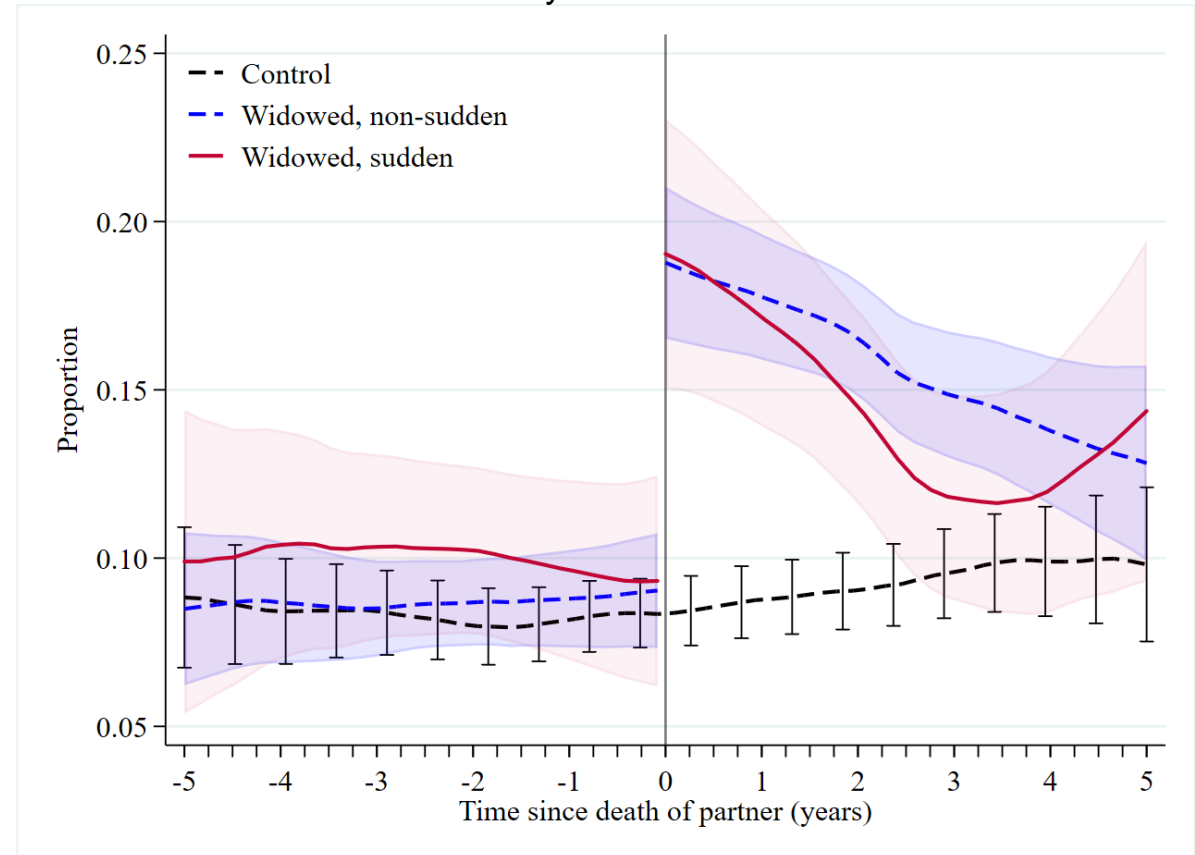
Longitudinal analysis: Mental health

How widowhood affects depressive symptoms? (EURO-D scale)

In the last month have you cried at all?



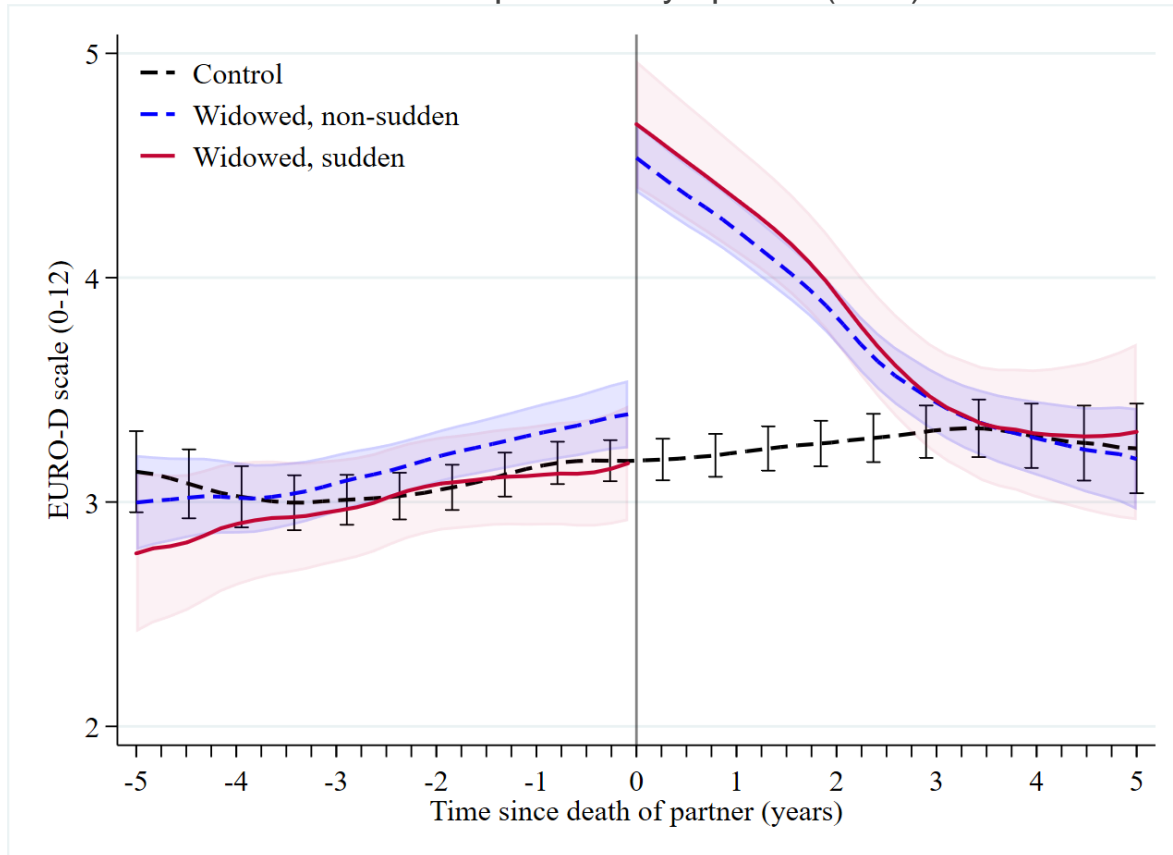
In the last month have you felt that would rather be dead?



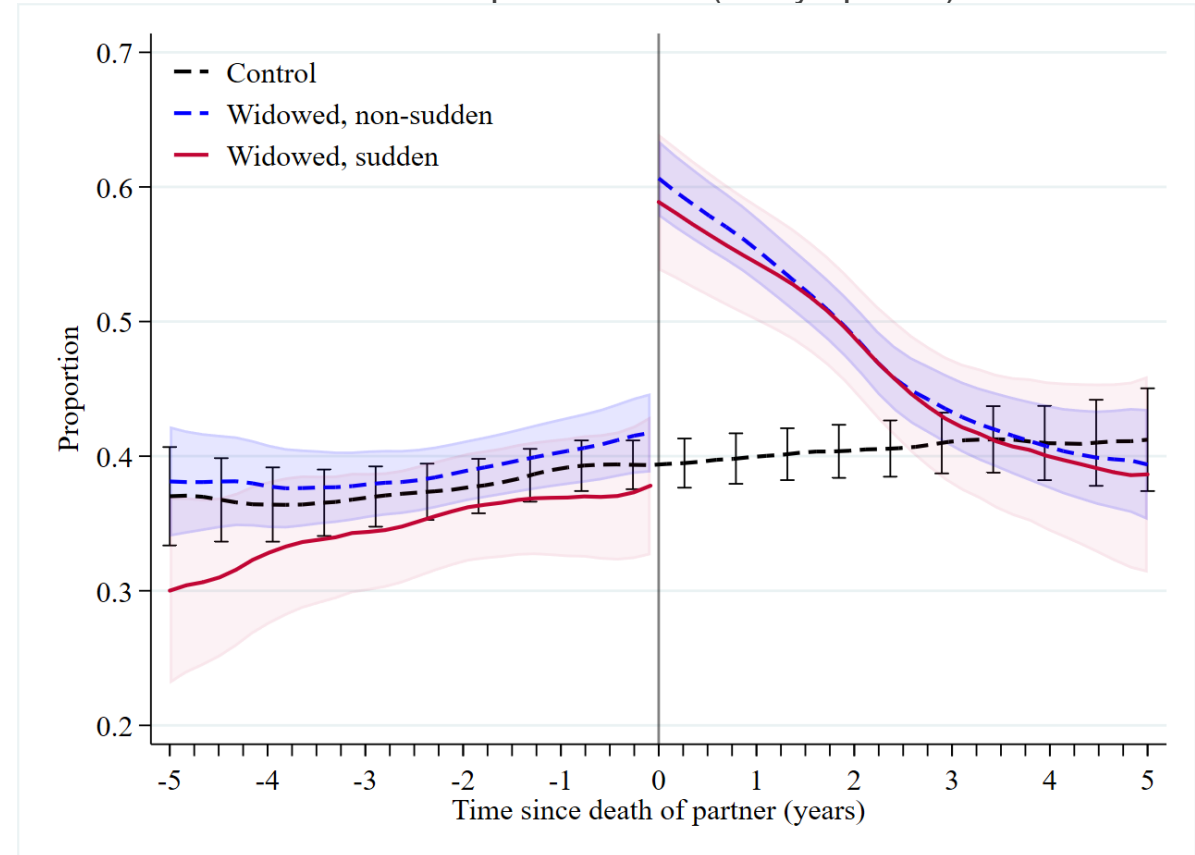
Longitudinal analysis: Mental health

How widowhood affects depressive symptoms? (EURO-D scale)

Number of depressive symptoms (0-12)

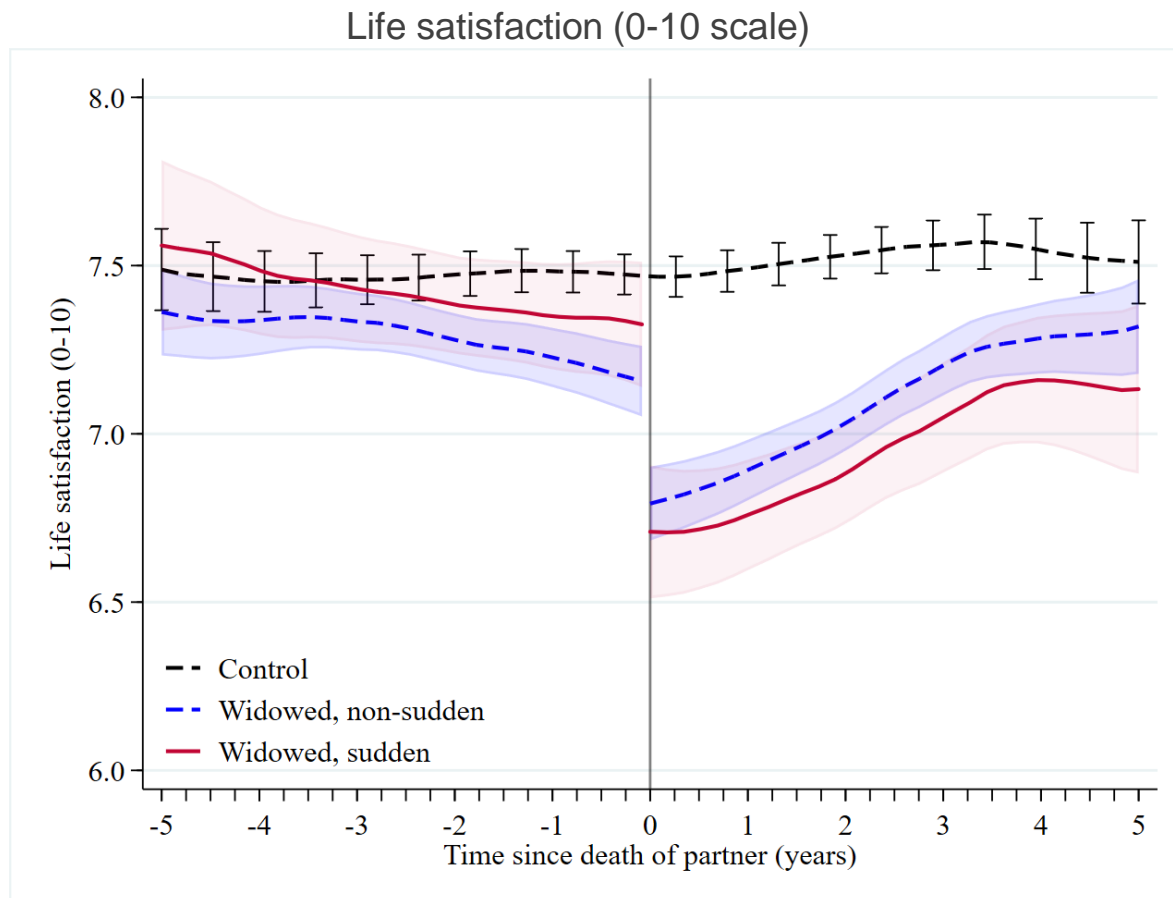


% with depression risk (4+ symptoms)



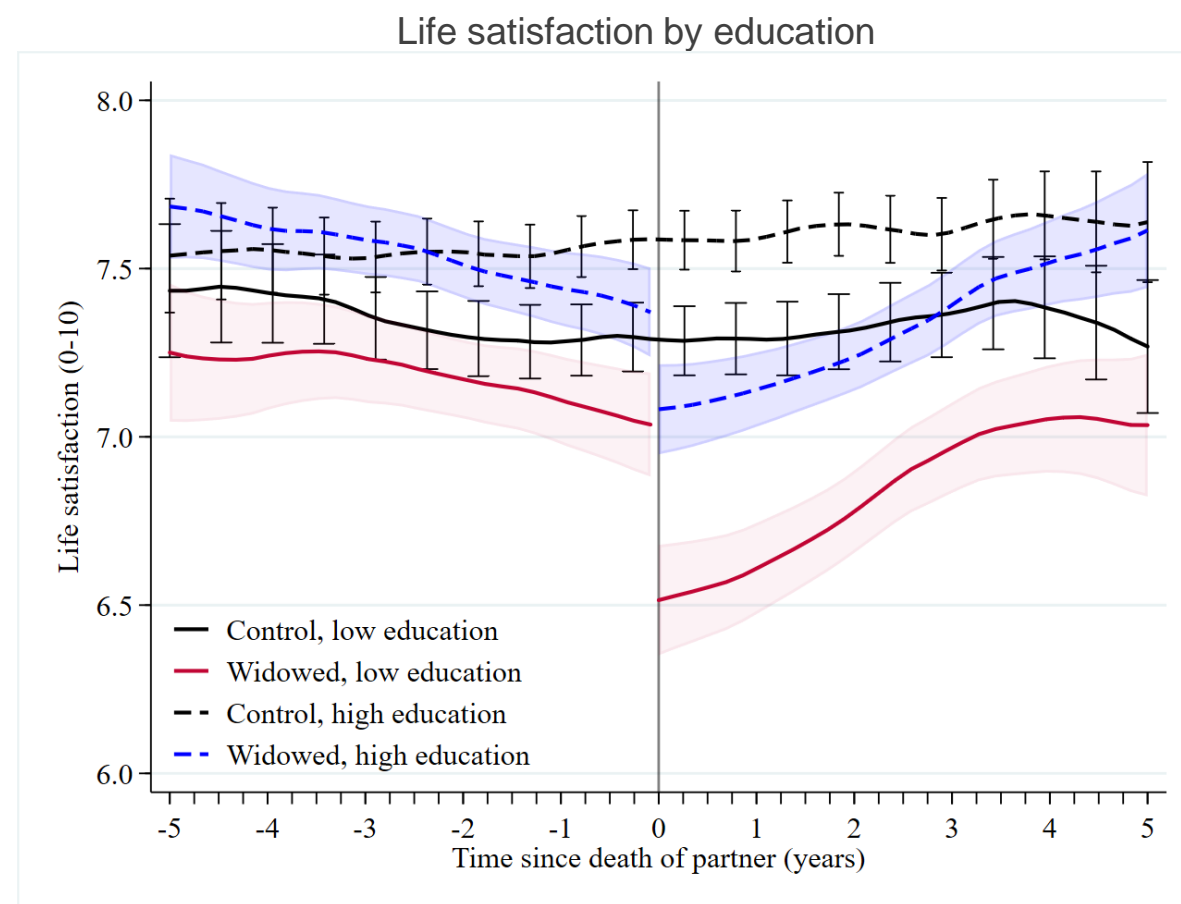
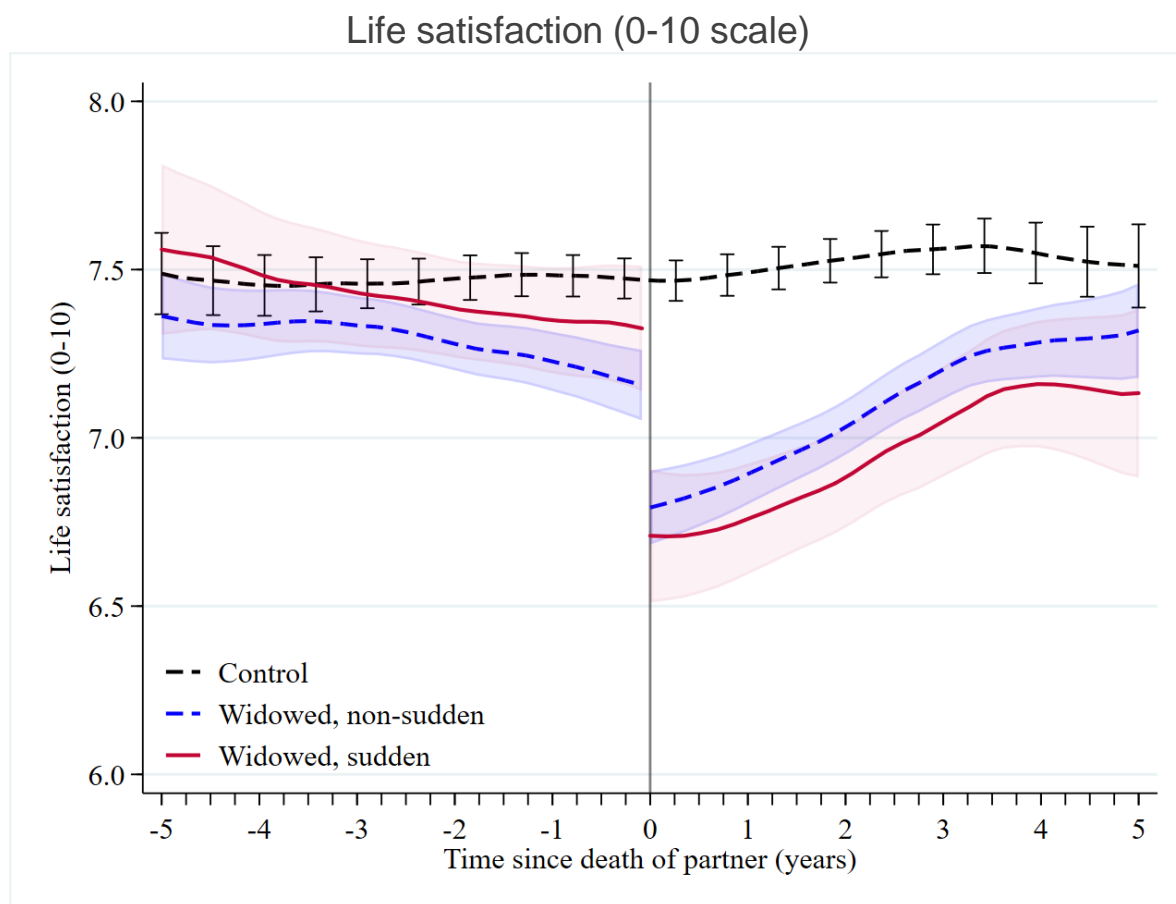
Longitudinal analysis: Life satisfaction

How widowhood affects satisfaction with life?



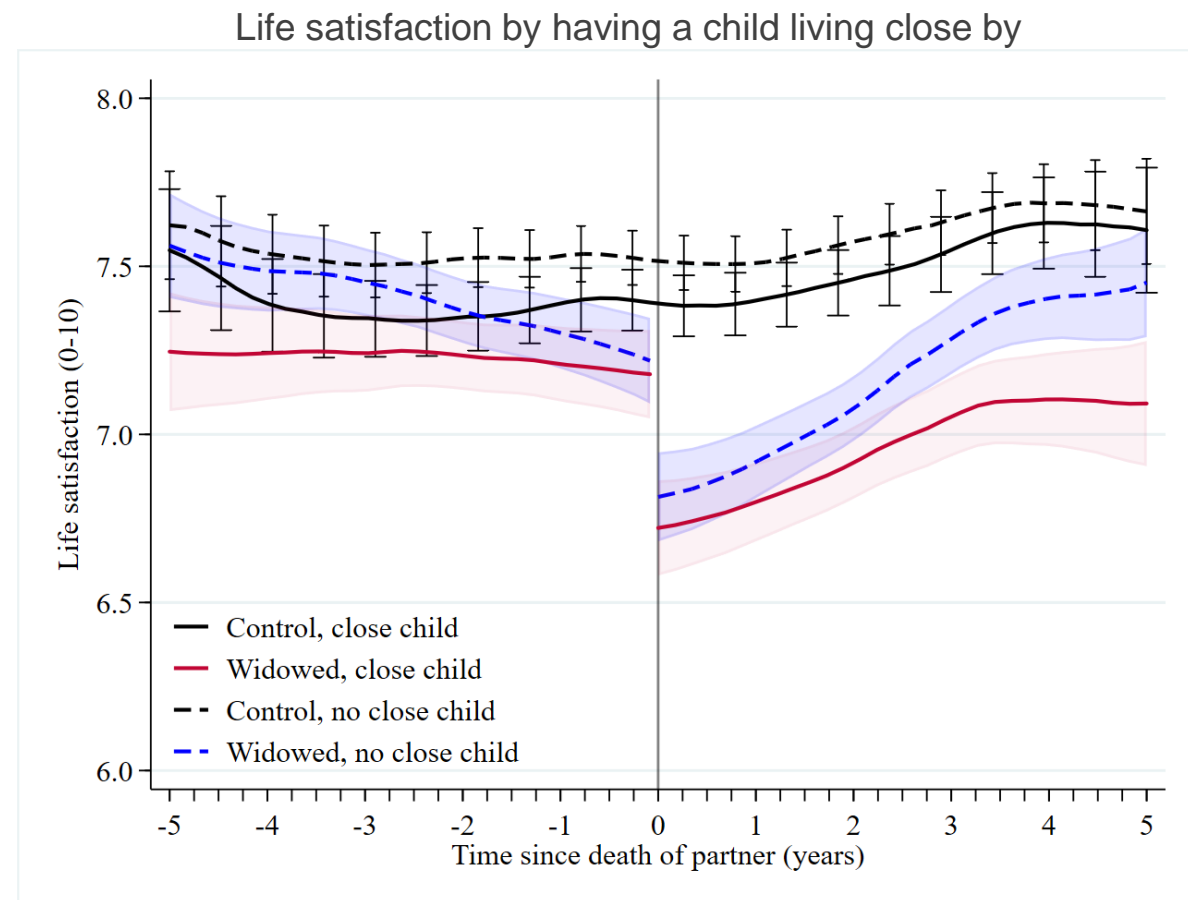
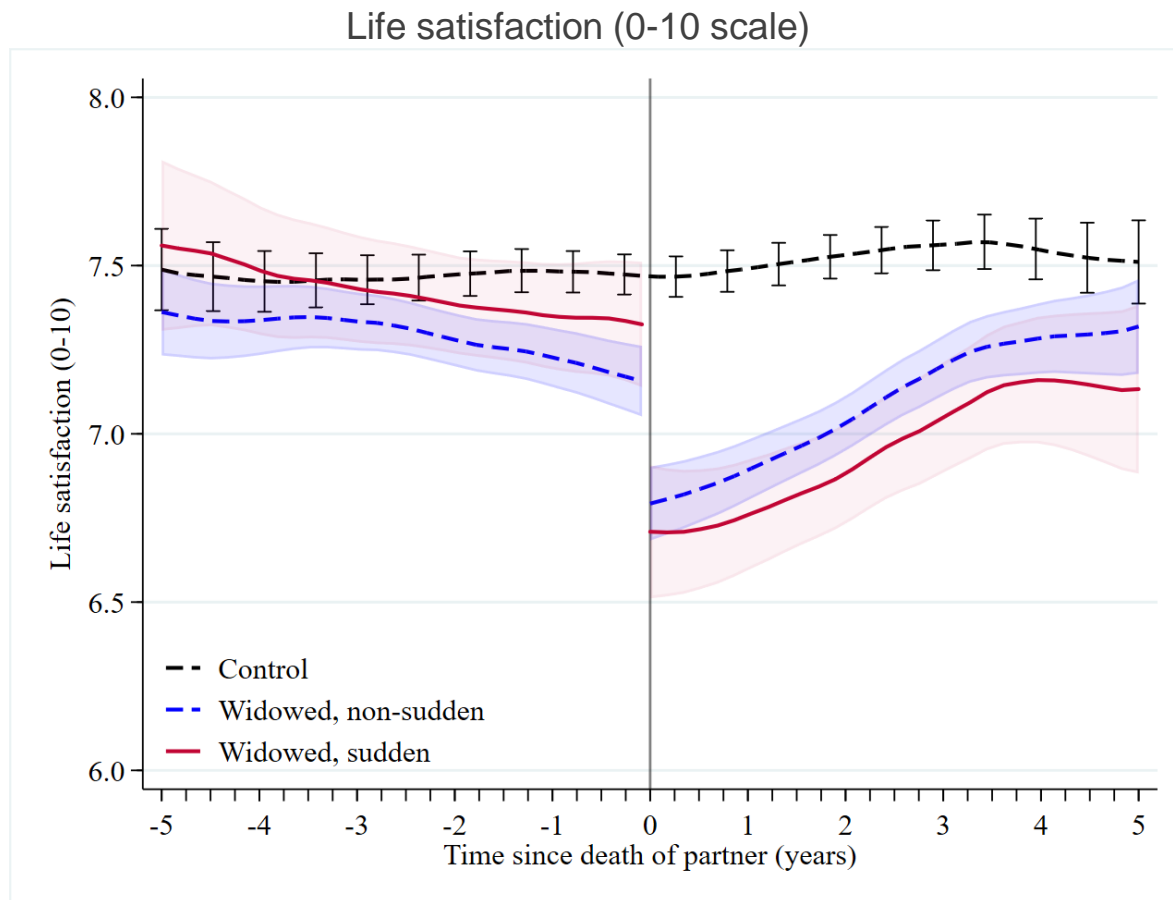
Longitudinal analysis: Life satisfaction

Does education moderate the impact of widowhood on life satisfaction?



Longitudinal analysis: Life satisfaction

Does family moderate the impact of widowhood on life satisfaction?



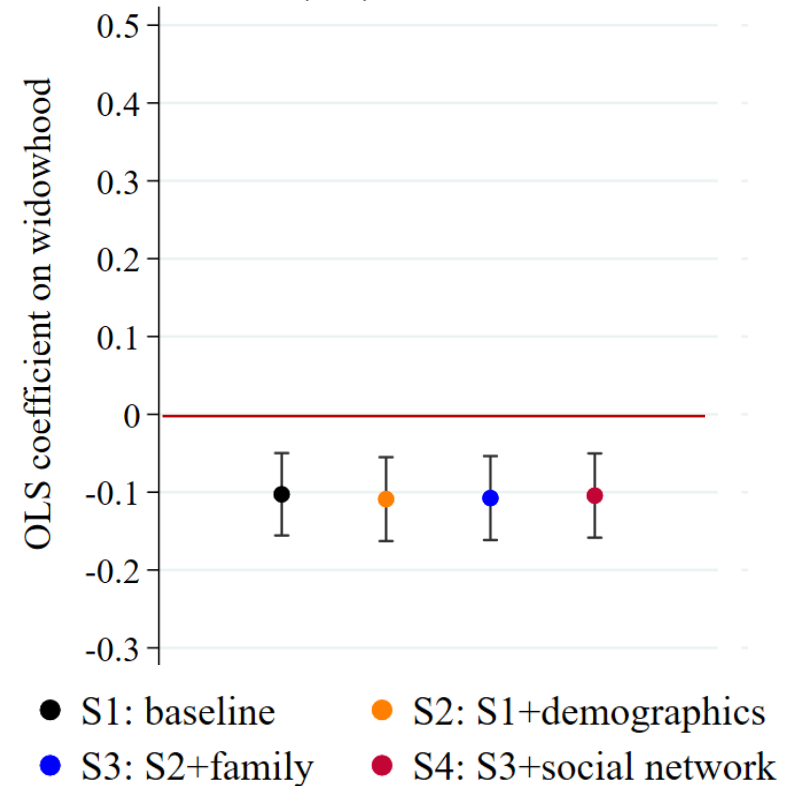
Longitudinal analysis: Other moderators?

- How widowhood affects life satisfaction conditional on pre-widowhood characteristics?
- Sample: in Wave 4+6, having a partner in Wave 4, in Wave 6 compare widows with continuously married
- Effect on bivariate life satisfaction conditional on:
 - widowhood
 -+ country dummies (S1)
 -+ demographics (S2)
 -+ family variables (S3)
 -+ social network from W4 (S4)

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Satisfied with life (1/0): OLS coefficient on widowhood:



Cross-sectional analysis: Widowhood and time-use

- Can something else explain the effect of widowhood on well-being?
- How does time allocation change in widowhood?
- Sample:
 - cross-sectional American Time Use Survey ATUS 2003-2018 (over 5000 widows)
 - daily dairies with detailed activities and with whom (whole day reported in 5 min. episodes)
- Change in time allocation conditional on widowhood (new, long-term) and set of demographic characteristics.
- Widows differ from otherwise similar married women by cutting back on home production (mainly food preparation and housework);
- Mostly by engaging in less of it each day, not doing it less frequently.
- They adapt with time since partner's death.

Estimates of the effect of widowhood on time use (minutes/day)

	Home production	Sleep	Other personal	TV-watching	Other leisure
Ind. var.:					
New widow	-22.67 (13.32)	25.53 (10.20)	-20.30 (8.42)	-0.25 (14.89)	17.69 (15.41)
Longer-term widow	-46.78 (4.14)	0.28 (3.17)	-2.96 (2.62)	29.11 (4.63)	20.34 (4.79)
R ²	0.094	0.039	0.020	0.047	0.050

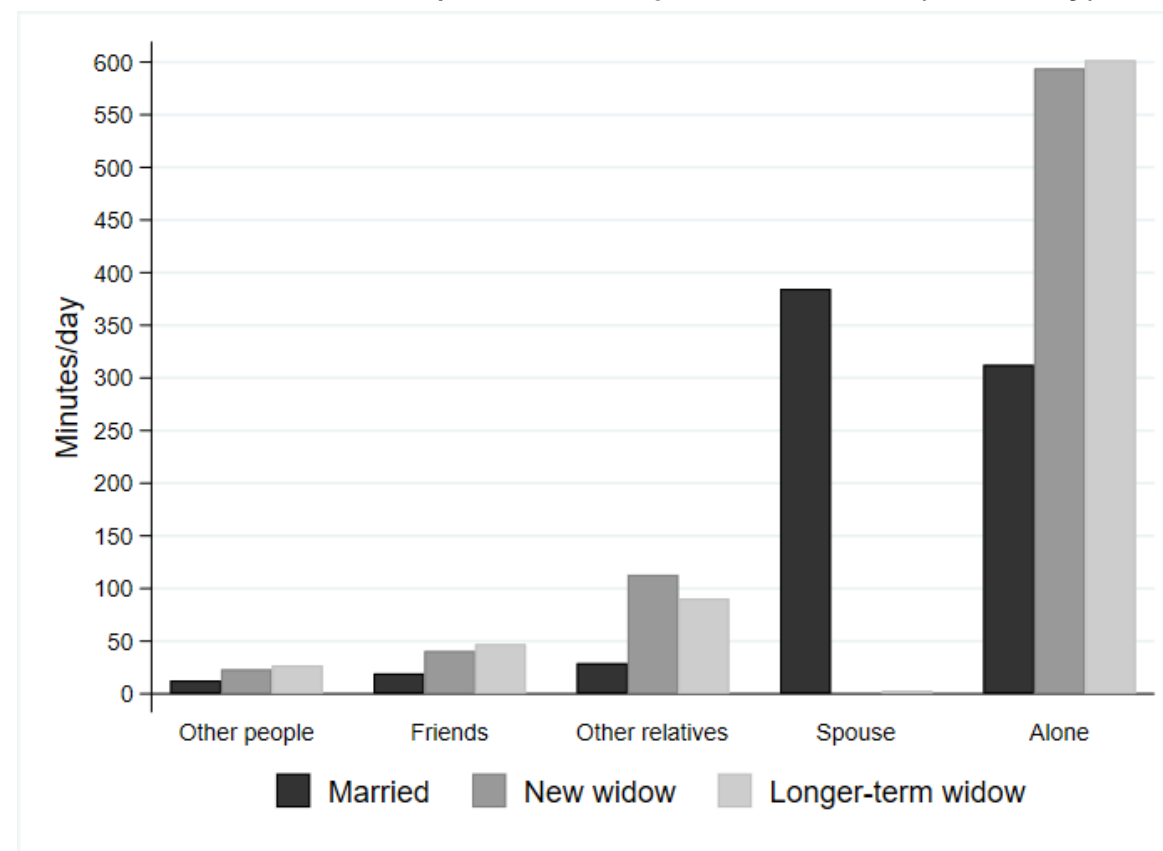
Note: The four equations are estimated jointly. Married women = reference category

Cross-sectional analysis: Widowhood and time-use

- Can something else explain the effect of widowhood on well-being?
- How does time allocation change in widowhood?

- Widows are alone for 2/3 of the time they had spent with their spouses.
- A small increase in time spent with friends and relatives shortly after becoming widowed.

Distribution of time spent with... by marital status (mins./day)

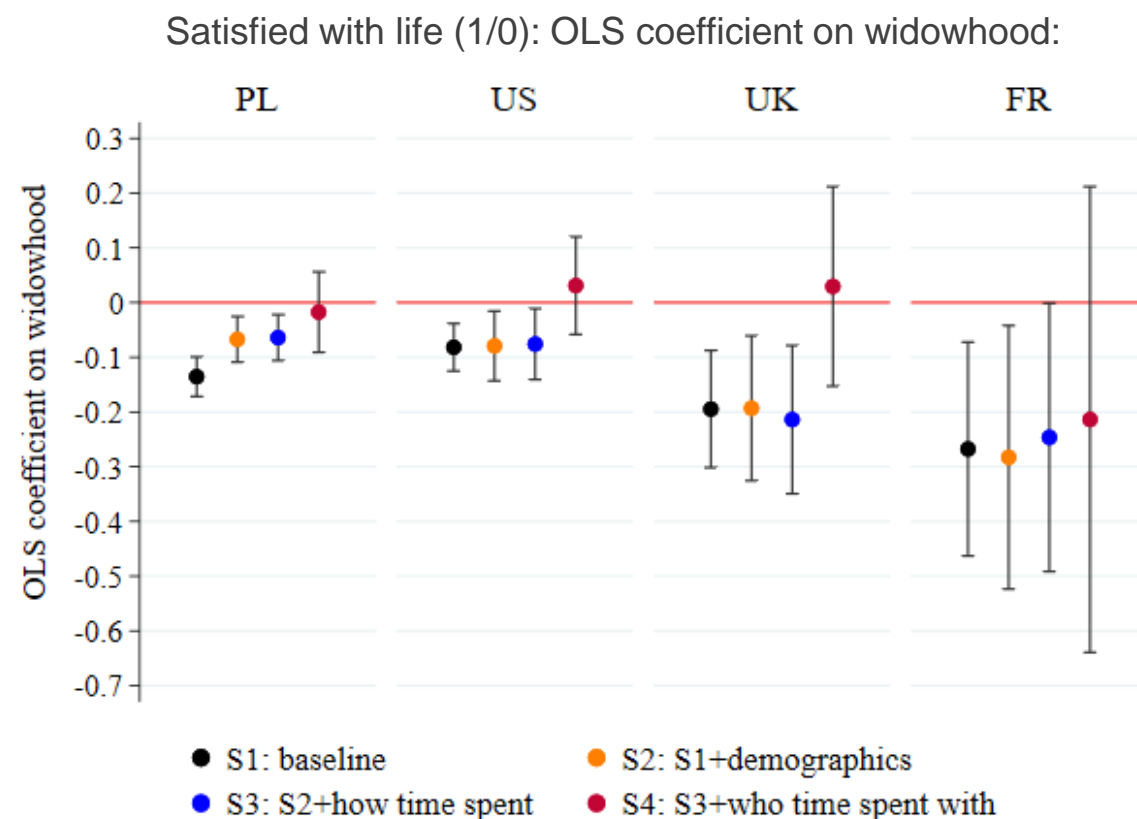


Cross-sectional analysis: Effect of widowhood or ...?

- How widowhood affects life satisfaction conditional on time allocation?
- Sample:
 - four countries (US, PL, FR, UK)
 - daily dairies with detailed activities and with whom
 - cross-sectional data, small samples,
few background variables and outcomes
- Effect on bivariate life satisfaction conditional on:
 - widowhood (S1)
 -+ demographics (S2)
 -+ how time spent (S3)
 -+ who time spent with (S4)

Cross-sectional analysis: Effect of widowhood or being alone?

- How widowhood affects life satisfaction conditional on time allocation?
- Sample:
 - four countries (PL, FR, UK, US)
 - daily dairies with detailed activities and with whom
 - cross-sectional data, small samples, few background variables and outcomes
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 - widowhood (S1)
 -+ demographics (S2)
 -+ how time spent (S3)
 -+ who time spent with (S4)



Results summary

- Longitudinal analysis of changes in well-being before and after becoming a widow using the SHARE panel data for 19 countries:
 - widowhood causes significant drops in mental health and life satisfaction
 - recovery is slow, especially among women with low education
 - (pre-widowhood) family composition and social network make little difference
- Time use surveys provide key explanation:
 - as compared to partnered older women widows spend much more time alone, which is the main driver of the difference in well-being

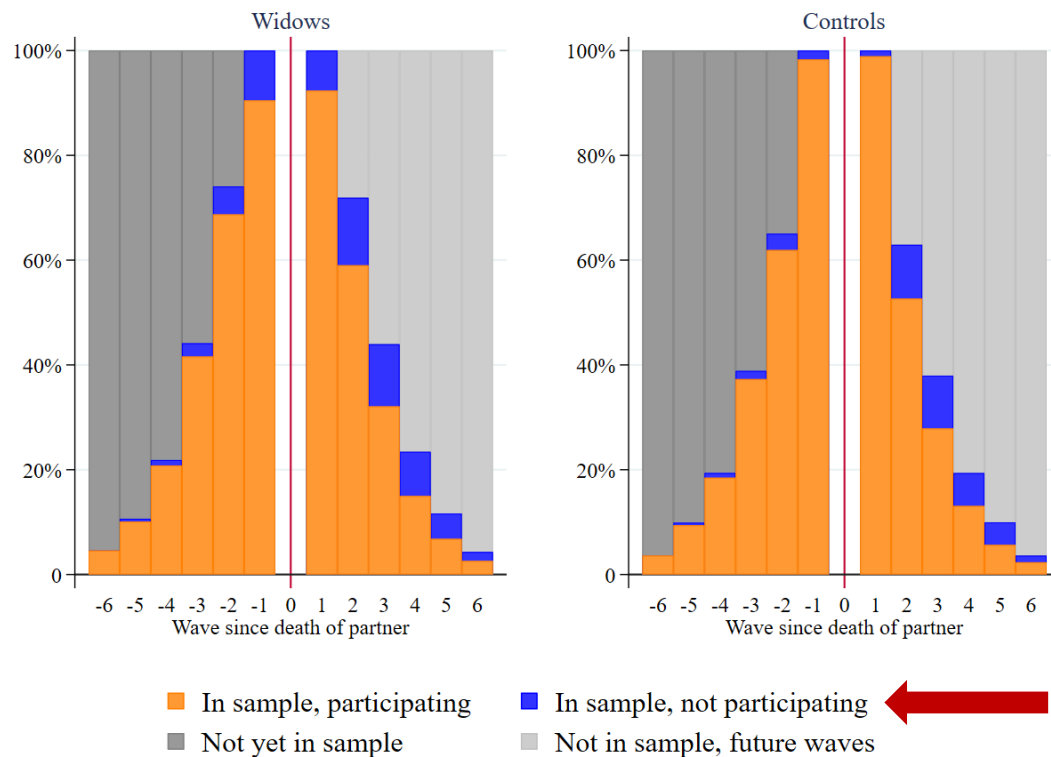
Widowhood and well-being: Further challenges

- What if widowhood affects survey participation?
 - Less likely participation of widows overall in surveys?
 - Greater panel attrition among widowed respondents?
- Does widowhood cause poorer health (and/or death, e.g. Moon et al. 2011)?
- Participation immediately before and after death of partner is less likely?
- Our effects are underestimated if we observe only the healthiest / happiest ones:
 - Least likely participation of those most affected by widowhood (poor health, death, relocation, etc.)
 - ⇒ True recovery of well-being would be slower
 - Least likely participation immediately after partner's death when effects are the strongest
 - ⇒ True drop in well-being would be larger, but recovery would be steeper

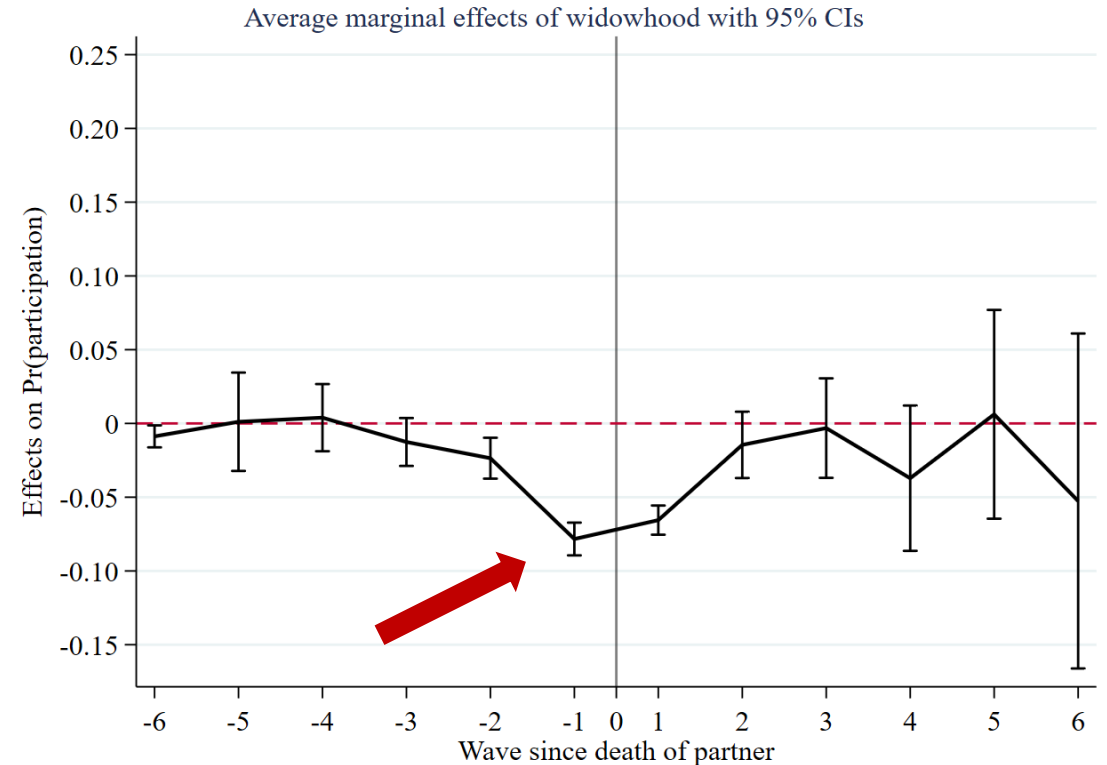
Further challenges: Selective attrition

- Example from preliminary work using SHARE data
- We still need (at least) two observations (before and after death) but allow waves to be missed, which facilitates examination of participation in different waves

Survey non-participation among widows and still-married



Effect of widowhood on the likelihood of participation



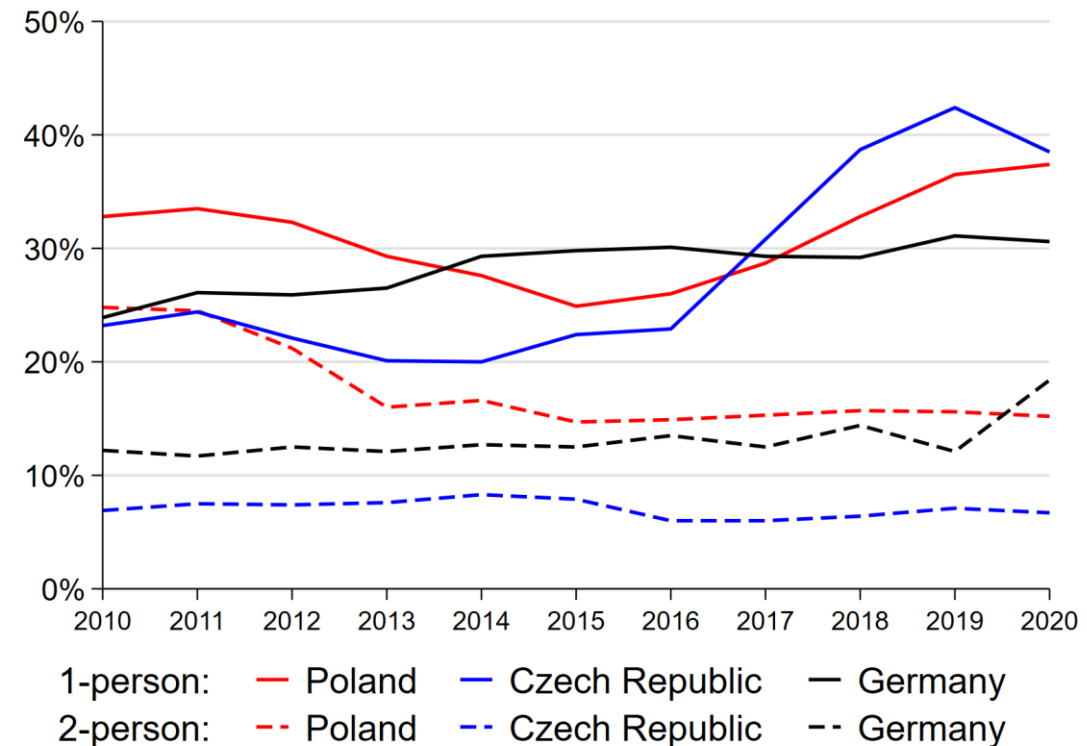
Further challenges: Selective attrition

- Results from preliminary work:
 - key challenge for identifying the implications of widowhood is participation and well-being measurement close to the death of partner (when the effect is likely to be strongest)
 - widowhood does not seem to have significant implications for panel attrition over a longer horizon
- Further research:
 - estimating bounds on well-being measures using information on non-participation
 - analysis using a combination of survey and administrative data

Economic conditions in widowhood

- Material conditions of single older individuals worse compared to couples; in particular for widowed individuals:
 - more likely to be women and to be older;
 - in developed countries special assistance targeted at widowed indiv. (survivors' pension)
 - but usually do not fully compensate for loss of partner's income
- To reduce old age poverty -> policy addressed specifically towards widowed individuals:
 - ⇒ An evaluation of the existing support in the Polish system and a reform proposed in the 2023 Parliamentary election campaign.

Share of people aged 65+ at risk of poverty or social exclusion in single-person and two-person households



Source: EUROSTAT

Evaluation of policies addressing widowhood: Challenges

- Detailed survey data needed, with reliable income/benefit information and demographic characteristics of households:
 - Polish Household Budget Survey 2021 (31 thousand households)
- Reforming survivors' pensions:
 - The value of survivors' pension depends on deceased partner's pension
 - In the data we usually have only current level of pension someone receives
 - No information on possible choice widows faced after death of their partners (when they became widows)
 - An alternative approach: examine what would happen to people who currently live in couples if one of them dies (Simulate death of husband and based on his current pension – simulate different pension scenarios)
- A microsimulation model needed to simulate changes in HH incomes/ transfers due to policies.

Which policies are we evaluating?

4 considered scenarios:

1. No support

2. The existing survivors' pension:

- claim own pension or 85% of pension of deceased partner

3. Reform proposal – widows' pension:

- claim own pension + 50% of survivors' pension or survivors' + 50% of own
- upper limit: 3 x average pension

4. Alternative reform (our suggestion):

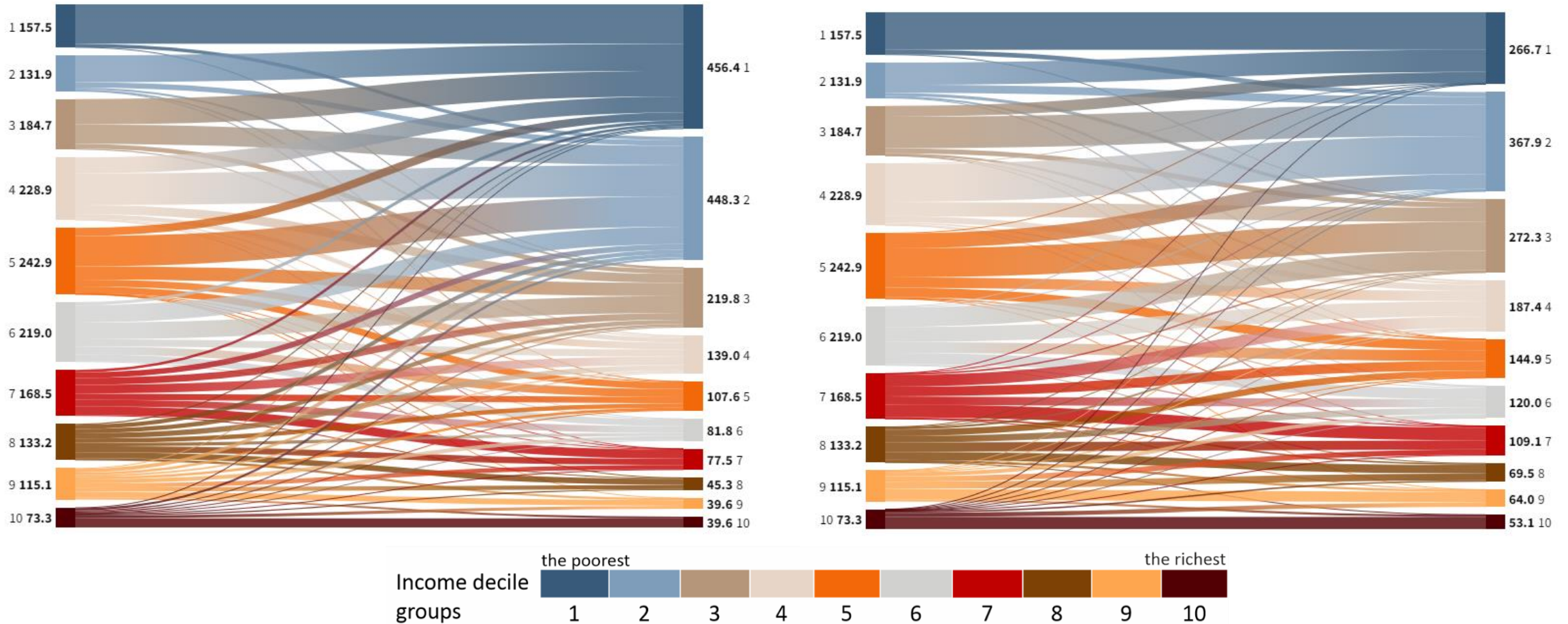
- claim own pension + 50% minimum pension or survivors' pension

How to evaluate the consequences of each policy?

Income position before and after simulated widowhood under different systems:

No support

Survivors' pension (existing)

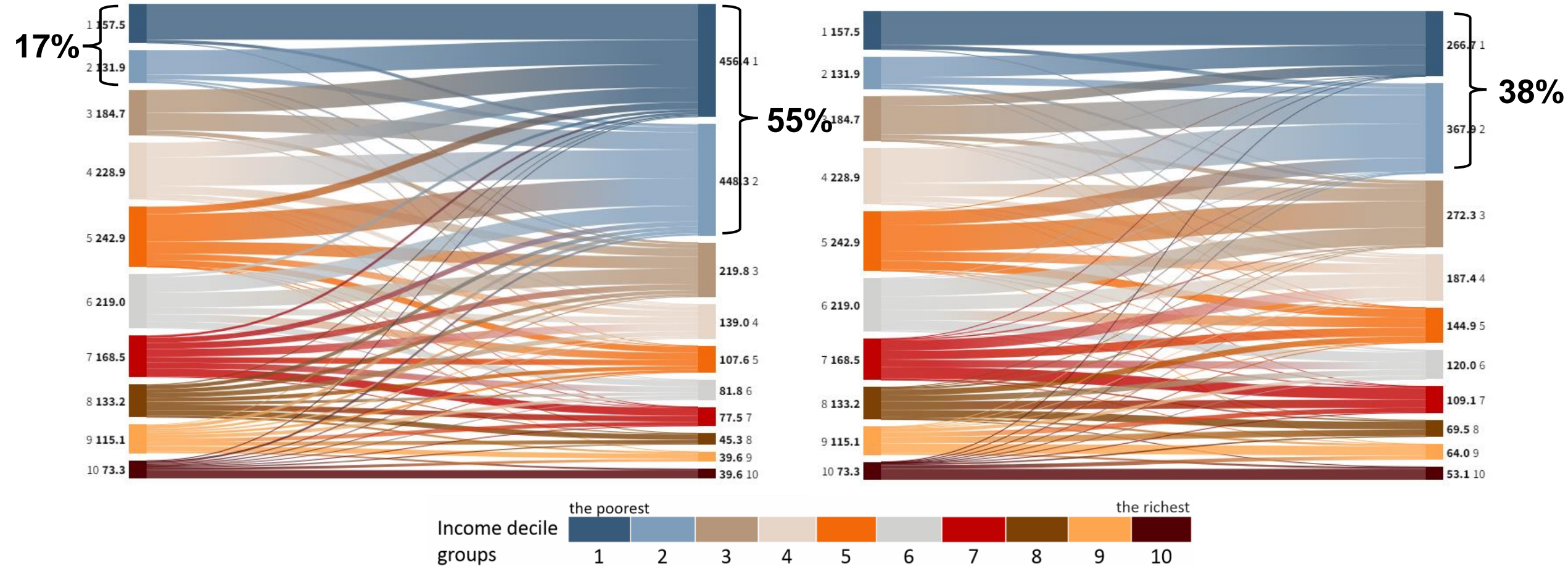


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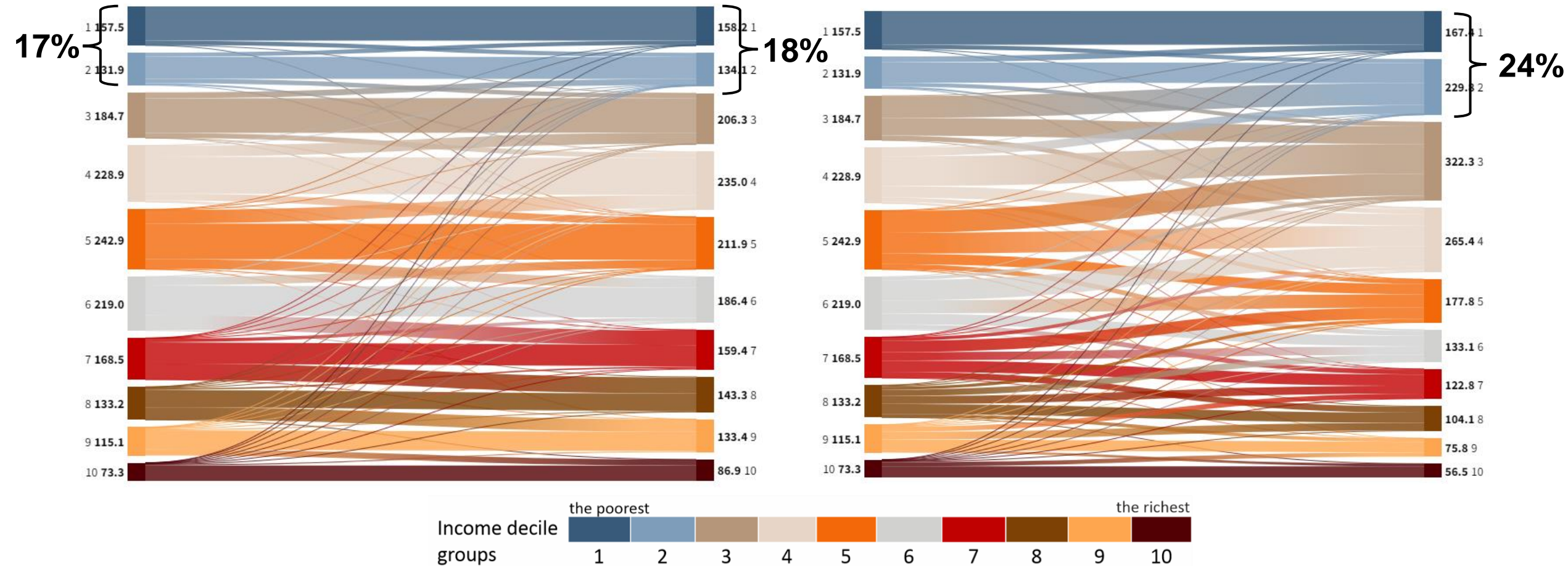


How to evaluate the consequences of each policy?

Income position before and after simulated widowhood under different systems:

Proposed reform (widows pension)


Alternative reform



How to evaluate the consequences of each policy?

Scenario:	Poverty rate	Total est. cost for the budget
Baseline	10.5%	
No support	35.3%	
Survivors' pension (existing)	20.7%	
Proposed reform (widows' pension)	11.0%	24 bn PLN (0.7% GDP)
Alternative reform	11.8%	11 bn PLN (0.3% GDP)

High income households benefit from the reform!



Summary: Policy response to economic consequences of widowhood

- Given the observed levels of poverty among single older individuals (largely widowed) it might be necessary to implement changes in the systems supporting widows and widowers in the EU;
- Lack of necessary detailed information in household surveys is a main challenge when evaluating reforms to survivors' support;
- Comprehensive evaluation of reforms needed: effectiveness in terms of reducing risk of poverty with respect to overall costs for the public budget;
- Monitoring public policy crucial: analysis of recent reform proposals in Poland triggered a response from the Polish government (a significantly modified reform adopted in terms of costs and distributional effects).

Appendix: Longitudinal analysis: descriptives

SHARE data	Sample for mental health analysis				Sample for life satisfaction analysis			
	Number of widows in sample		Average time (months) between partner's death and..		Number of widows in sample		Average time (months) between partner's death and..	
Country	Non-sudden	Sudden	..initial obs.	..final obs.	Non-sudden	Sudden	..initial obs.	..final obs.
Austria	81	26	51.44	50.93	113	33	53.04	40.31
Belgium	147	35	62.22	56.38	162	36	61.35	51.61
Croatia	16	13	8.69	11.79
Czech Republic	139	54	40.77	45.81	179	68	42.13	39.86
Denmark	105	28	63.77	53.02	122	33	61.33	47.92
Estonia	139	55	28.71	42.45	222	89	41.25	31.51
France	126	30	62.04	55.73	152	33	61.75	47.39
Germany	81	27	60.30	49.18	114	34	55.41	39.06
Greece	80	67	86.47	53.87	101	77	79.44	48.51
Israel	92	21	56.48	62.34	119	21	63.46	52.74
Italy	171	57	72.75	48.91	197	63	68.91	45.94
Luxembourg	4	1	11.20	27.20	18	2	20.55	19.50
Netherlands	72	27	45.75	48.63	72	27	45.94	48.42
Poland	105	36	58.91	52.07	107	37	59.19	51.35
Portugal	17	5	26.64	55.23	43	10	46.66	36.36
Slovenia	29	7	23.89	39.36	81	18	35.49	24.03
Spain	215	68	60.64	51.42	303	88	57.39	44.91
Sweden	134	26	70.12	64.77	153	28	66.96	61.65
Switzerland	54	20	59.11	46.62	66	26	58.65	38.79
Total	1791	590	57.84	51.76	2340	736	56.20	43.95

Appendix: Time-use analysis: detailed regressions

*Estimates of the Impact of Marital Status on Home Production, Women Aged 70+, ATUS 2003-18 (minutes/day), N=7,642**

Dep. Var.:	Care of others in household	Food prep/ cleanup	Housework	Purchasing	Purchasing groceries
Ind. Var.:					
New widow	-10.21 (3.37)	-27.62 (5.77)	-4.84 (8.11)	3.07 (6.69)	-0.24 (1.89)
Longer-term widow	-7.88 (1.05)	-29.07 (1.79)	-13.44 (2.52)	-2.12 (2.08)	1.26 (0.59)
R ²	0.017	0.051	0.039	0.048	0.027
Means (S.E.) Married women (adjusted)	10.87 (1.03)	74.22 (1.69)	76.31 (2.19)	54.42 (1.85)	8.25 (0.47)
Husbands of women 70+	7.12 (0.77)	22.34 (0.94)	11.89 (0.80)	47.13 (1.59)	7.36 (0.42)

*Additional covariates are vectors of age ranges, of educational attainment, racial/ethnic identity, metropolitan status, region, day of week, month of year, and year, and an indicator of immigrant status. The four equations are estimated jointly, with married women the excluded category. Standard errors in parentheses.