

Wealth after divorce: The importance of pension right's adjustment in women's wealth accumulation

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Why should we care about women and their wealth?

Private assets increasingly important for retirement income

- ▶ Women live longer than men, but have lower pensions
→ wealth more important for women to smooth consumption in old age
- ▶ Marriage rates ↓ and single-headed female households ↑
→ women who can rely on husband's wealth/pensions ↓

Existence of gender wealth gap shown in many countries

→ studies document lower wealth for women, mostly comparing single men and women e.g. Yamokoski, Keister 2006; Ruel, Hauser 2013; Ravazzini, Chesters 2018

→ with individual level data also within couples e.g. Sierminska et al. 2010, Grabka et al. 2015

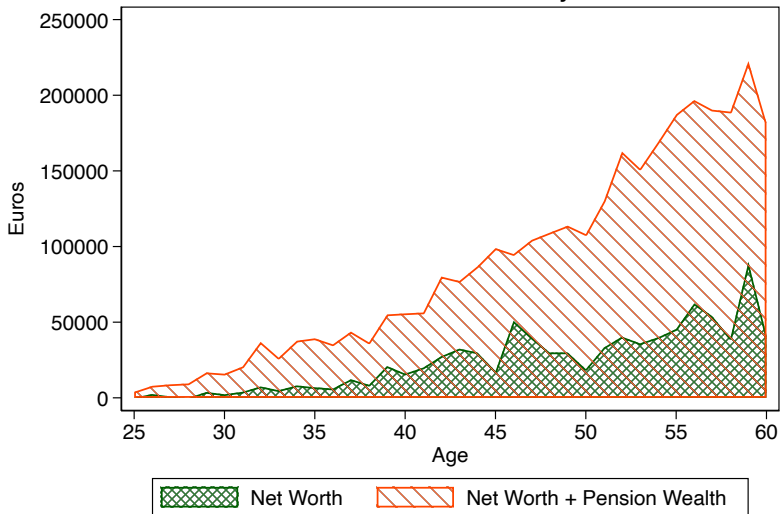
Systematic differences between men and women with respect to

- ▶ labour market attachment Warren et al. 2001
- ▶ occupations Goldin 2014
- ▶ wages Blau & Kahn 2000
- ▶ saving behavior, risk preferences and returns Fisher 2010

Wealth and Pensions

- ▶ Most studies focus on private wealth
- ▶ very few have access to data that would allow them to calculate potential benefits from public pensions or public pension entitlements Sierminska & Wronski, 2022
- ▶ Cordova et al. 2022 find that the gender wealth gap shrinks once public pension wealth is added from 35% to 28%
- ▶ Omitting pension wealth from gender wealth gap studies omits an important source of wealth

Median Wealth Germany 2012



Source: Cordova et al. 2002; SOEP 2012 includes individuals 25-60 years old.

Wealth and Pensions

Thus, accounting for pension wealth will give us a "truer" impression of economic well-being

Selected previous literature

The impact of divorce on several outcomes:

- ▶ household income → decline by 30% Hauser et al, 2018 Andress and Bröckel, 2007 Andress et al, 2006
- ▶ employment and earnings → the lower the labor market attachment before separation the more pronounced are the employment effects afterwards Brüggmann & Kreyenfeld, 2023 Thielemans and Mortelmans, 2019
- ▶ wealth → big effect on real estate assets, remarriage dampens the effect, similar effects for women and men Kapelle, 2022 Wilmoth & Koth, 2002 Boertien & Lersch, 2021
- ▶ pension wealth → the impact on the GWG and public pension gaps Cordova et al, 2022 Kreyenfeld et al. 2022

No paper so far examining the impact of life trajectories on public pensions and wealth accumulation

German Pension Schemes

Three Pillars

1. Statutory: Mandatory Public-Pension Scheme, contributions during life-cycle Contributions during non-employment: child rearing, unemployment, education —> reduce the gender pension wealth gap
2. Company pension plans: voluntary and complementary to the statutory
3. Voluntary insurance plans: private pension saving plans
 - ▶ The insured acquire pension entitlements throughout their working careers.
 - ▶ Pension entitlements are proportionate to overall life-cycle earnings during the active phase of working life.
 - ▶ Report the **exact** information from the (public or private) pension provider's obligatory **annual statement** to the insured

Pension Equalization and Divorce/Widowhood

- ▶ Three basic groups of countries regarding pension scheme rules in the case of divorce: no specific rules (SE,FI); sharing or splitting (CA,DE,UK); benefit awarded (US)
- ▶ Introduced in Germany in 1977 to protect the economically weaker spouse by compensating for the unequal distribution of tasks during marriage

What is the impact of pension rights equalization (via pension wealth) on women's wealth accumulation?

Are those divorced better off than women with a different family biographical background?

This Paper

From a life-course perspective we expect different marital sequences to have distinct effects on wealth accumulation

We distinguish between:

- ▶ current marital status (married, cohabiting, living alone)
- ▶ previous marital events (divorce, widowhood, never being married)

Focus is on those **divorced**, yet we also include **widows** because a survivor's pension can be interpreted as a retroactive pension adjustment.

Never married are also considered as a good benchmark of wealth accumulation for those that have not had the opportunity to benefit from household economies of scale.

Empirical strategy

Focus is on different wealth measures: net worth, statutory pension wealth, total pension wealth, augmented wealth

Estimation analysis:

OLS and median regression for subgroups of the augmented wealth distribution

Contribution: One of the first papers to incorporate pension wealth into wealth to examine the impact of divorce and more generally marital history

Our dataset: Individual wealth data in SOEP 2012, 2013

▶ **Socio-Economic Panel (SOEP)**

- ▶ Representative survey of German households
- ▶ Ind. and HH wealth in 2002, 2007, 2012, 2017 and 2019
- ▶ 2013 asked about current pension entitlements based on 2012 official annual information provided by the insurer
- ▶ demographic and labor market characteristics for individuals
- ▶ Sample: working-age (20-60) non-retired women

▶ **Measures used**

- ▶ net worth, statutory pension wealth, total pension wealth
- ▶ augmented wealth = net worth + pension wealth

Net wealth is top coded at the .1 and 99.9th percentile and pension wealth is top coded

⇒ Typically there is no survey data available on statutory public pension entitlement.

Net Wealth - (current market value, imputed) Pension Wealth, SOEP 2012, 2013

Augmented Wealth = Net worth + Pension Wealth

Net Worth

- ▶ Property wealth (and associated debt)
- ▶ Building loan contracts
- ▶ Financial assets (in forms such as savings accounts, bonds, shares or investments).
- ▶ Private insurance policies
- ▶ Collectibles (in the form of gold, jewelry, coins, or valuable collections, etc.)
- ▶ Net business assets (gross business assets minus debts)
- ▶ Consumer credits and loans

- ▶ Pension wealth = sum of all present value of pensions entitlements (Bönke et al., 2019) following "accrual method" Wolff(2015)

$$PV_p = \sum_{t=0}^{T-a} s_{a,t} \frac{1}{(1+i)^t} pension_t^p \quad (1)$$

$S_{a,t}$ probability of a person of age a in year 2012 surviving until year t
 $T - a$ the remaining maximum lifespan differentiated by sex and birth cohort;
 i constant discount rate - 3%
 $pension_t^p$ the pension entitlement from pension scheme p . Pension wealth distribution compared to administrative data

Empirical strategy -OLS / Median regression

$$Y_i = X_i' \beta_i + \epsilon_i, \quad (2)$$

where Y_i is the wealth outcome of interest for individual i (statutory pension wealth, total pension wealth, net worth or augmented wealth)

X_i' is the vector of explanatory variables (marital history, age, immigrant indicator, east, no of children, under 5 years old, education, exp FT/PT/unempl)

ϵ_i is the error term

Partition the augmented wealth distribution into three parts:

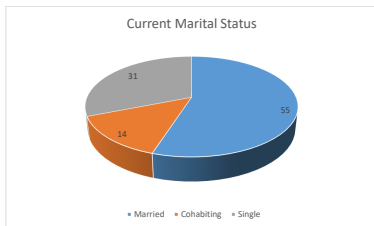
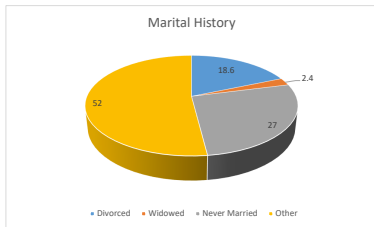
the bottom 30%

the middle 40%

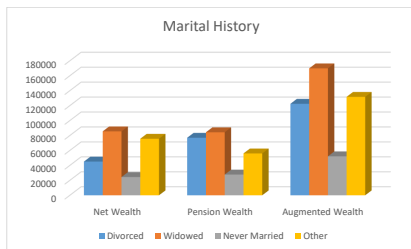
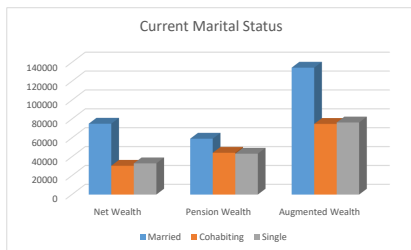
the top 30%

Perform median regressions to check for variations of effects across the augmented wealth distribution.

Marital status and marital history distribution (n=5,245)



Individual Wealth Levels for Women by Marital Status



OLS -Statutory and Total Pension Wealth for Women

	All	Married	Cohabiting	Single
Divorced	4,414* (1824.657)	6,356** (2217.476)	1,301 (4642.445)	-3,847 (4607.723)
Never Married	574 (2074.691)	0 (.)	2,572 (2704.073)	-7,525 (4570.056)
Widowed	7,411 (3935.514)	15,151 (9583.124)	12,852 (8479.819)	-5,058 (6340.106)
Pension Wealth				
	All	Married	Cohabiting	Single
Divorced	3,188 (3431.111)	5,290 (4450.156)	8,105 (6856.418)	-8,465 (7004.130)
Never Married	-1,130 (3257.112)	0 (.)	5,968 (3478.279)	-11,652 (6734.665)
Widowed	7,395 (9230.985)	-6,425 (12781.449)	4,981 (9154.380)	13 (14435.962)
Observations	5245	2907	718	1620

OLS -Net Wealth and Augmented Wealth for Women

	Net Wealth			
	All	Married	Cohabiting	Single
Divorced	-32,343*** (6749.097)	-39,797*** (8904.785)	-21,152 (18226.728)	-5,349 (11212.556)
Never Married	-3,982 (6636.672)	0 (.)	-7,074 (11759.542)	3,028 (10770.539)
Widowed	12,565 (16020.648)	-19,882 (50216.095)	17,216 (34564.259)	41,532* (20638.470)
	Augmented Wealth			
	All	Married	Cohabiting	Single
Divorced	-28,691*** (8409.385)	-33,789** (11370.323)	-13,023 (18420.269)	-13,895 (13160.392)
Never Married	-4,865 (7694.314)	0 (.)	-1,050 (11569.685)	-8,648 (12809.294)
Widowed	20,307 (19380.712)	-26,399 (55593.178)	22,222 (35276.750)	41,545 (26405.309)
Observations	5245	2907	718	1620

Summary so far

- ▶ Statutory pensions play the main role when it comes to redistribution of pension rights and their effect on pension wealth
- ▶ Having gone through divorce is positively and significantly correlated with statutory pension wealth for all and currently remarried women
- ▶ We confirm the expectation of a negative effect of divorce on net wealth compared to married women
- ▶ The negative effect for augmented wealth is smaller

Effect across the distribution

- ▶ Effect may be more relevant for women at the lower end of the distribution (due to lower LM attachment)
- ▶ at the upper end of the distribution may even be in favor of the spouse (in the case where the spouse accumulates less pension wealth and wants to be compensated)

Median Regression -Impact of Marital History on Statutory Pension Wealth

	Statutory Pension Wealth		
	Bottom 30%	Median	Top 30%
Divorced	2,157** (811.98)	5,436** (1901.42)	12,073 (7380.81)
Never Married	-1,328 (884.16)	3,484 (2821.12)	-528 (12148.91)
Widowed	2,522 (2273.39)	7,566* (3720.44)	-7,478 (14882.59)
Observations	2298	2107	840
Median	27,785	27,500	27,938

Median Regression -Impact of Marital History on Net and Augmented Wealth

	Net Wealth		
	Bottom 30%	Median	Top 30%
Divorced	-689 (528.21)	-11,880** (4528.55)	8,669 (15932.95)
Never Married	604 (575.16)	-1,818 (6718.98)	18,418 (26225.83)
Widowed	-267 (1478.89)	6,365 (8860.88)	129,868*** (32127.03)
Observations	2298	2107	840
Median	14,900	14,300	15,000

	Augmented Wealth		
	Bottom 30%	Middle 40%	Top 30%
Divorced	-2,049 (1365.92)	-3,707 (4704.87)	8,013 (22132.61)
Never Married	-918 (1487.34)	5,735 (6980.58)	21,200 (36430.53)
Widowed	4,330 (3824.32)	12,885 (9205.87)	84,105 (44627.94)
Observations	2,298	2,107	840
Median	71,274	70,485	71,175

Summary so far

Across the distribution

Statutory pensions

- ▶ For those that experienced divorce effect is (+) and ↑
- ▶ Never married no systematic results
- ▶ Widows strongest effect in the middle

Net wealth & Augmented wealth

- ▶ NW: Significant wealth losses in the middle for those divorced
- ▶ NW: For widows strong effect of inheritances at the top
- ▶ AW: No significant effects
- ▶ for divorced the (+) effect of SP is balanced out by (-) for NW

Divorced women are at least not significantly worse off financially than married women → partially as a result of pension equalization

Empirical strategy - East vs. West

Eastern and western Germany → cultural, normative and economic differences in the two regions even 30 years after reunification

- ▶ LFP higher in east (2pp) → 12pp after reunification (Destatis, 2023)
- ▶ gender pay gap 7% in east and 19% in west (Destatis, 2023)
- ▶ lower income and wealth levels in the east

OLS -Impact of Marital History on Statutory Pensions in East and West Germany

	East part of Germany			
	All	Married	Cohabiting	Single
Divorced	11,466** (3876)	12,271* (4841)	18,009* (8886)	1,282 (9209)
Never Married	3,740 (3924)	0 (.)	12,614 (5181)	-8,348 (8324)
Widowed	9,443 (7036)	10,396 (12904)	18,379 (14073)	-2,267 (12291)
	West part of Germany			
	All	Married	Cohabiting	Single
Divorced	2,138 (2061.157)	4,347 (2489.653)	-4,436 (5315.687)	-5,335 (5251.337)
Never Married	87 (2430.024)	0 (.)	-1,154 (3027.825)	-6,435 (5272.953)
Widowed	7,961 (4799.247)	18,761 (13224.081)	14,905 (10420.583)	-5,178 (7625.125)

OLS -Impact of Marital History on Net and Augmented Wealth in East Germany

	Net Wealth			
	All	Married	Cohabiting	Single
Divorced	-4,881 (14335)	-4,787 (19827)	-7,213 (16509)	9,568 (8136)
Never Married	-6,126 (10545)	0 (.)	-13,557 (14035)	2,475 (7194)
Widowed	14,933 (16023)	20,323 (53246)	-9,214 (27335)	40,015** (15121)
	Augmented Wealth			
	All	Married	Cohabiting	Single
Divorced	8,844 (22920)	10,973 (31924)	19,217 (20445)	18,402 (12783)
Never Married	-1,428 (15749)	0 (.)	4,649 (15868)	1,264 (12207)
Widowed	53,001 (32799)	15,045 (46582)	13,212 (31198)	95,976 (49670)
Observations	1236	646	208	382

OLS -Impact of Marital History on Net and Augmented Wealth in West Germany

	Net Wealth			
	All	Married	Cohabiting	Single
Divorced	-39,738*** (7700.924)	-49,578*** (9899.059)	-25,747 (23384.668)	-6,185 (13735.245)
Never Married	-5,772 (8286.180)	0 (.)	-4,571 (14477.352)	3,750 (13315.572)
Widowed	12,218 (23186.587)	-43,400 (78671.913)	39,103 (50513.169)	46,359 (28833.810)
	Augmented Wealth			
	All	Married	Cohabiting	Single
Divorced	-38,973*** (8526.237)	-46,457*** (10960.017)	-23,656 (23195.169)	-17,148 (15865.335)
Never Married	-9,091 (9239.769)	0 (.)	-3,131 (14148.008)	-7,319 (15674.579)
Widowed	6,432 (24838.670)	-48,469 (91637)	40,849 (50876)	26,147 (31667)
Observations	4009	2261	510	1238

Summary so far

East and West

- ▶ Unlike in the west, in the east there are strong (+) significant effects of divorce on SP, yet no sign effect on NW & AW (most likely due to lower wealth levels)
- ▶ In the west there are strong (-) effects on NW overall and for those remarried
- ▶ The combined effect on AW is slightly smaller but significant

Across the distribution - not shown

- ▶ In the east, no significant effects at all (small sample size)
- ▶ In the west, strong (+) effect on SP in the middle (+5K) and (-) on NW (-13K)
- ▶ They cancel out for AW in the middle and (-3K) for the bottom of the distribution

Conclusion

- ▶ Pension rights adjustment work well for statutory pension wealth, but cannot fully compensate the strong negative effects of a divorce on net worth
- ▶ In the east, the cushioning effect of pension adjustment seems to work overall
- ▶ In the west, the all-dominant effect comes from the strong negative effect on NW that still prevails for AW

Pension equalization does not close the gender gap that exists in NW (prevalent in the West)

To prevent old age poverty of divorced (and all) women there still is the need to close the gender pay gap and to improve labor market attachment

Thank you for your attention!

Comments are welcome.

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