

**Protection or selection?  
New insights into the effect of children on union  
dissolution in Germany**

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# Motivation

- protection vs. selection still an open question
- data with specific information
- methodological reasons

# Theoretical arguments

- “marital specific investment” (Becker/Landes/Michael 1977)
- selection (also: Becker/Landes/Michael 1977)

# Previous findings

## protection

- age of youngest children (Waite/Lillard 1991; Rapp 2008)
- (temporary) increase in divorce risk after moving out of the last child (Kalmijn/Poortman 2006; Klein/Rapp 2010; Hiedemann/Suhomlinova/O'Rand 1998)

# Previous findings

## selection

- higher divorce risk in the case of pre-marital births (Härkönen/Dronkers 2006; Hewitt 2009; Manning 2004)
- positive correlations between relationship quality and (plans to give) birth (Wiik/Bernhardt/Noack 2009; Myers 1997; Lillard/Waite 1993)

# Previous findings

## stress

- „disruptive nature of an unintended birth”  
(Guzzo/Hayford 2012: 1141)
- unintended compared to intended fertility  
increases risk of separation (Guzzo/Hayford 2012)

# Hypothesis on consequences of pregnancies/ births for union stability

protection:      PLANNED = UNPLANNED > NO BIRTH

selection:        PLANNED = UNPLANNED = NO BIRTH

selection\*:      PLANNED > UNPLANNED = NO BIRTH

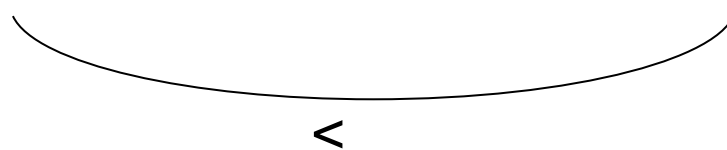
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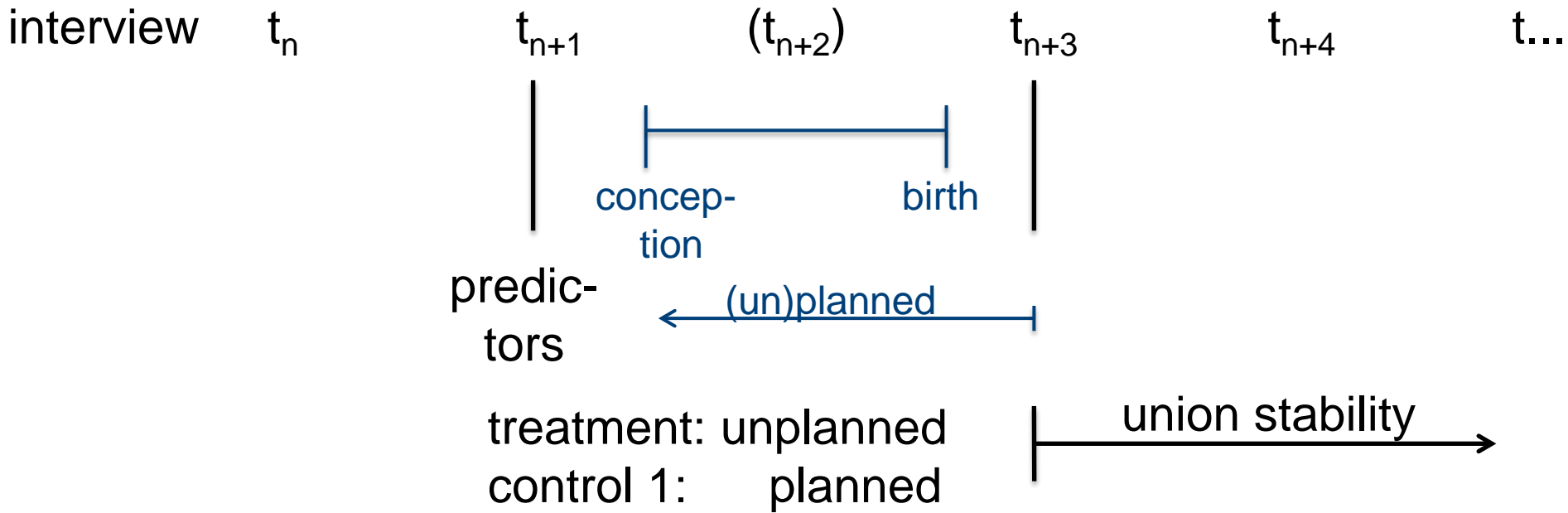
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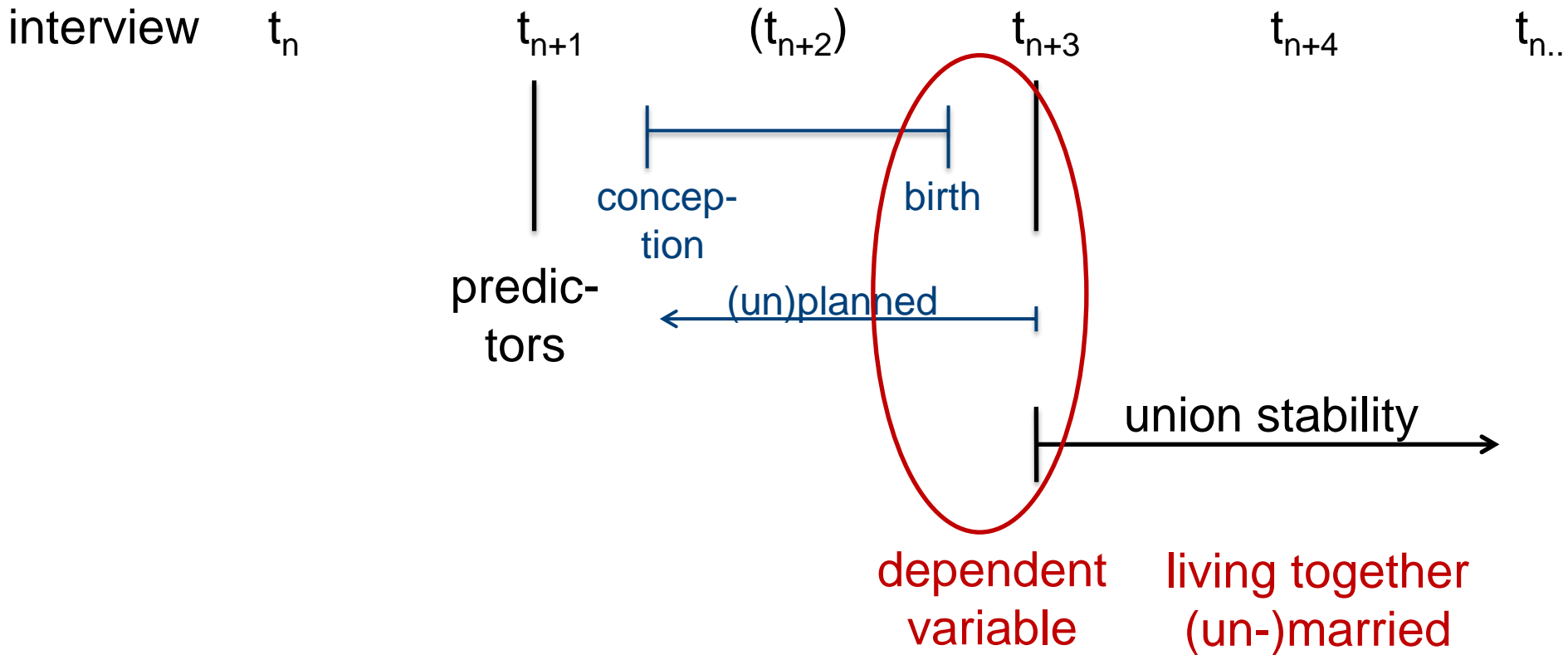




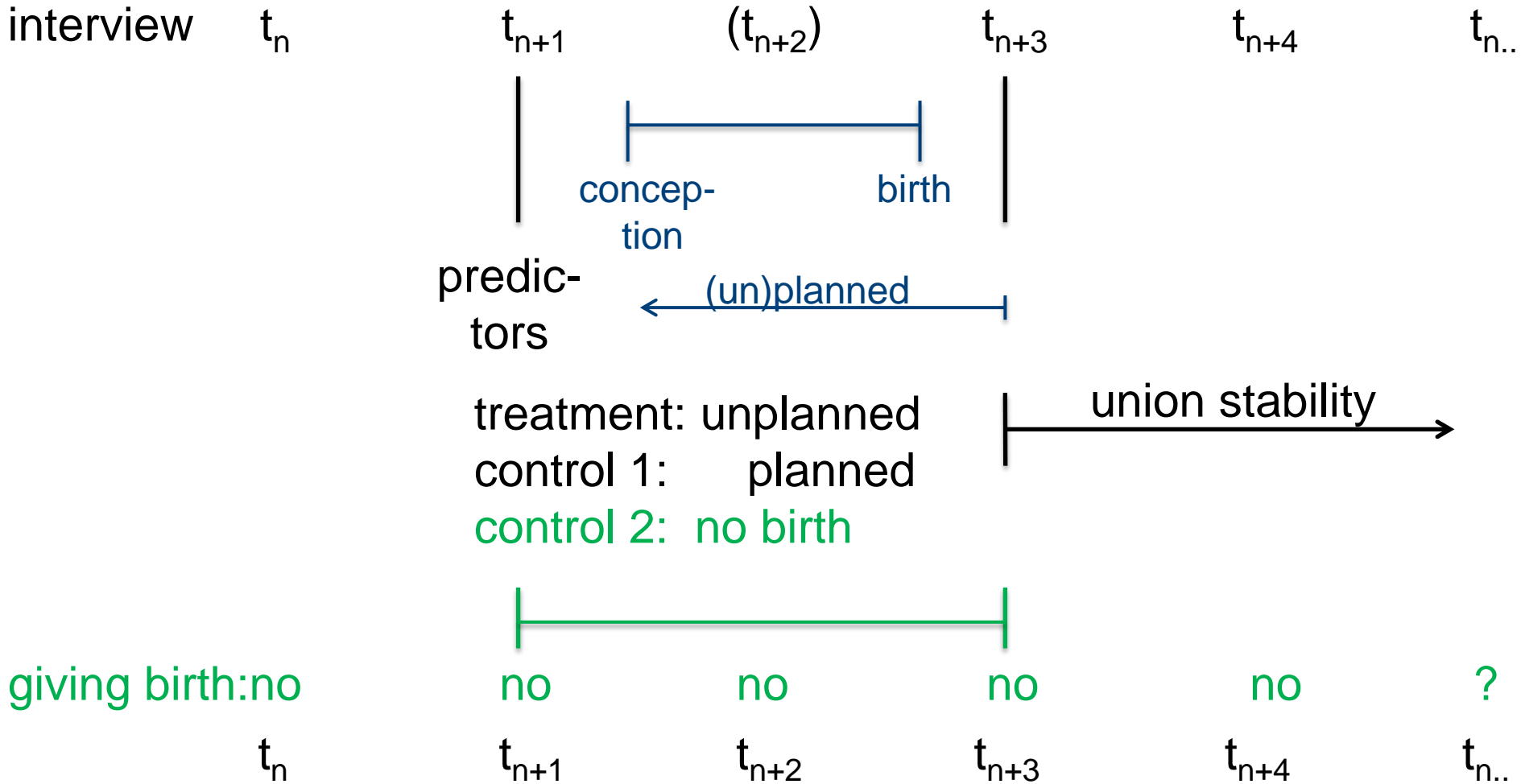
# Research design



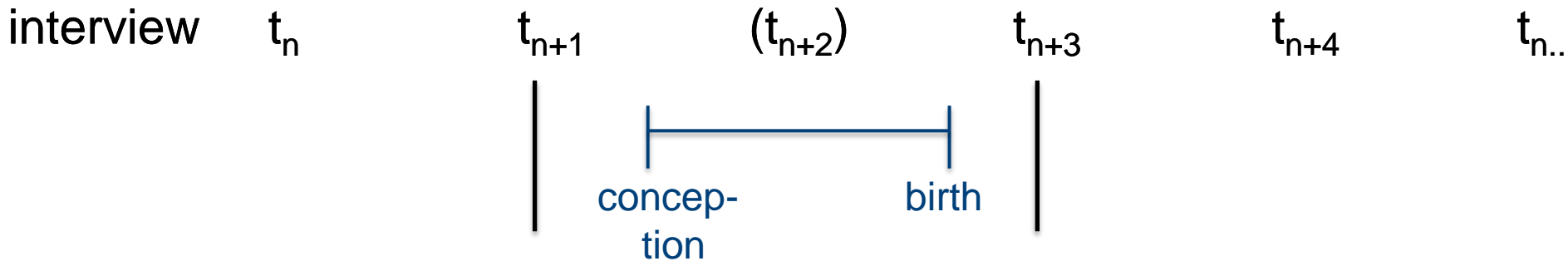
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# Research design



# Research design



predic-  
tors

relationship:	married, union, partner, no relationship
children:	0, 1, 2, 3, 3 plus
education:	lower, upper and higher level
lfs:	unemployment
life satisfaction:	rather high (vs. rather low)
childhood exp.:	living all the time with both parents
age:	age group dummies
region:	rural, urbanized, city

# Data & methods

data:

German Socio-Economic Panel Study (SOEP)

(info: <http://diw.de/soep>; Wagner/Frick/Schupp 2007)

only selected years, 2000-2013

# Data & methods

**method 1:** propensity score matching (PSM)

$\tau_i = Y_i(1) - Y_i(0)$  ,  $i$  = individual,  $D = 1$  Treatment,  $D = 0$  no Treatm.

$$\tau_{ATT} = E(\tau|D = 1) = E[Y(1)|D = 1] - E[Y(0)|D = 1]$$

↑

$$E [Y(0)|D = 0]$$

assumption: unconfoundness for controls:  $Y(0) \perp D|X$

$$Y(0) \perp P(D = 1|X)$$

matching algorithm:

single nearest neighbor with tolerance level +/- 3%-p. (caliper=0.03)

Source: Caliendo/Kopeinig 2008; Rubin 1974

## Data & methods

$E(Y)$

union stability estimated by survivor function

**method 2:** Kaplan-Meier-Method/ Product-Limit-Estimator

## Descriptives

interview before conception and report on planning status

+ union after birth

	n	% unpl	n	% unpl
total	1,922	26%	1,777	22%
by relationship before conception				
married	1,101	19%	1,095	19%
consensual union	501	26%	482	24%
relationship	214	39%	149	30%
no relationship	98	72%	46	59%
missing	8	50%	5	40%

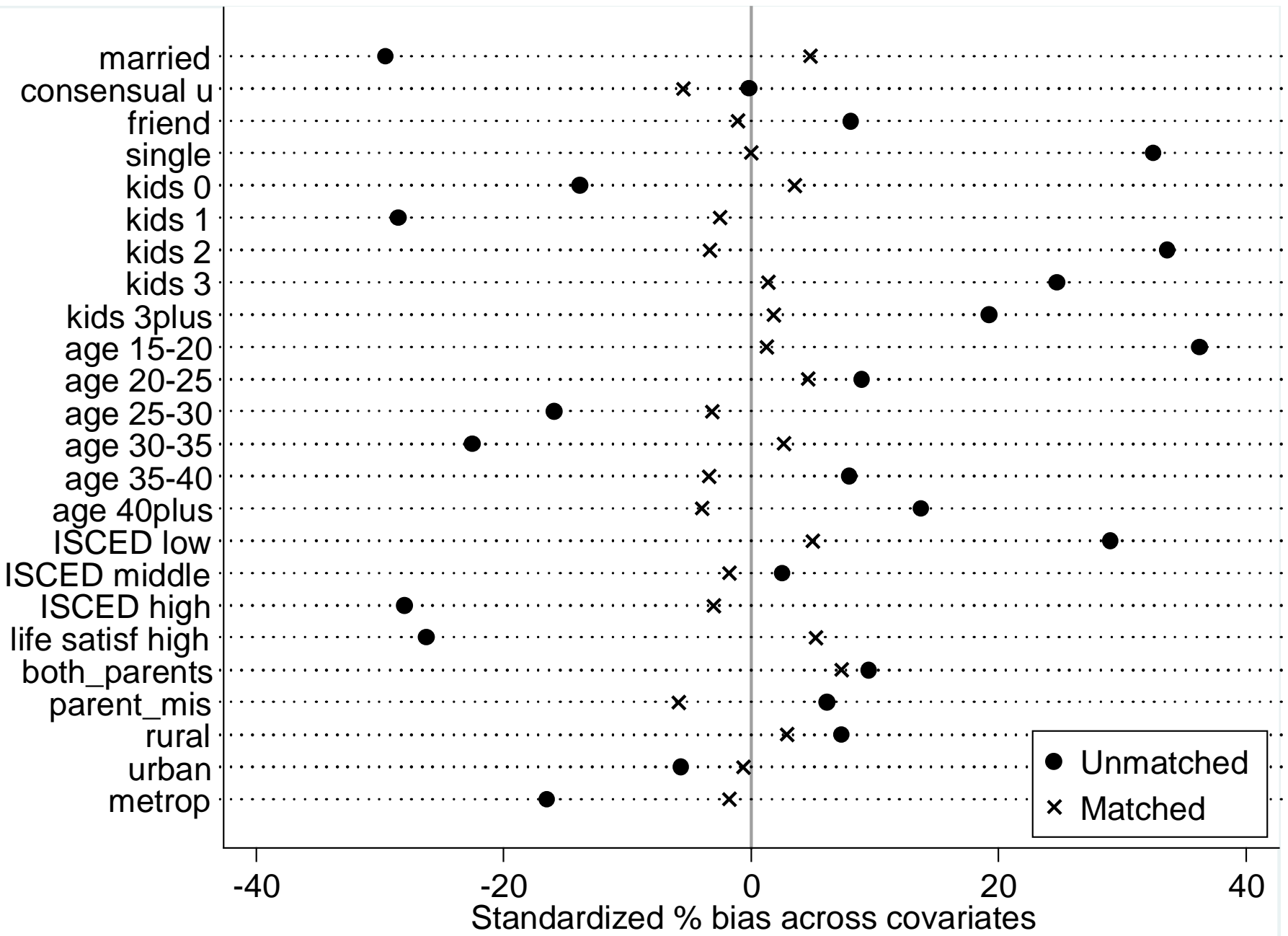
Sources: SOEP. v30; own calculations.



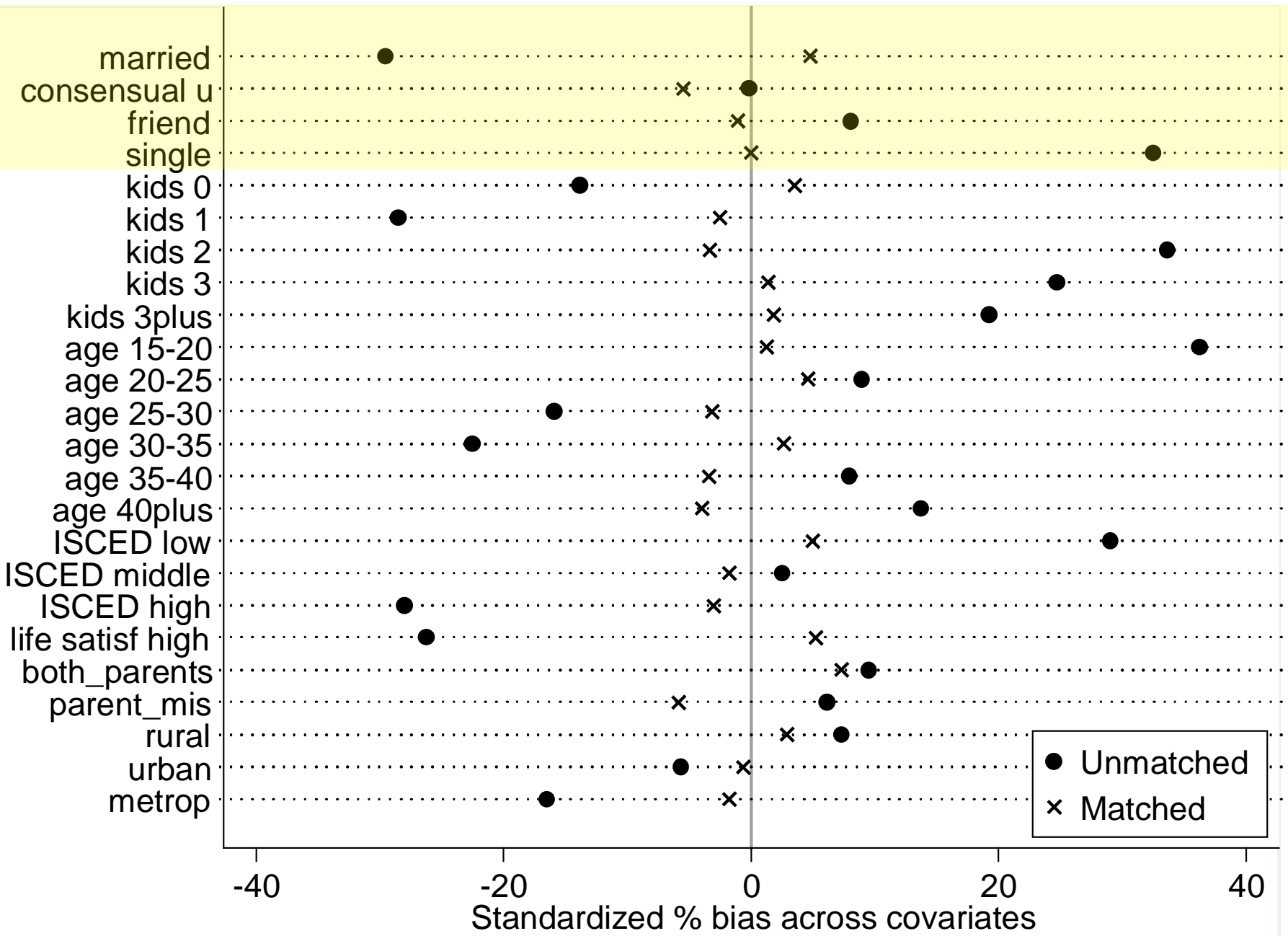
# PSM Unplanned vs. Planned

PSM

<b>Treatment</b>	off support	on support	total
untreated (planned)	0	1361	1361
treated (unplanned)	53	341	394



Sources: SOEP. v30; own calculations.



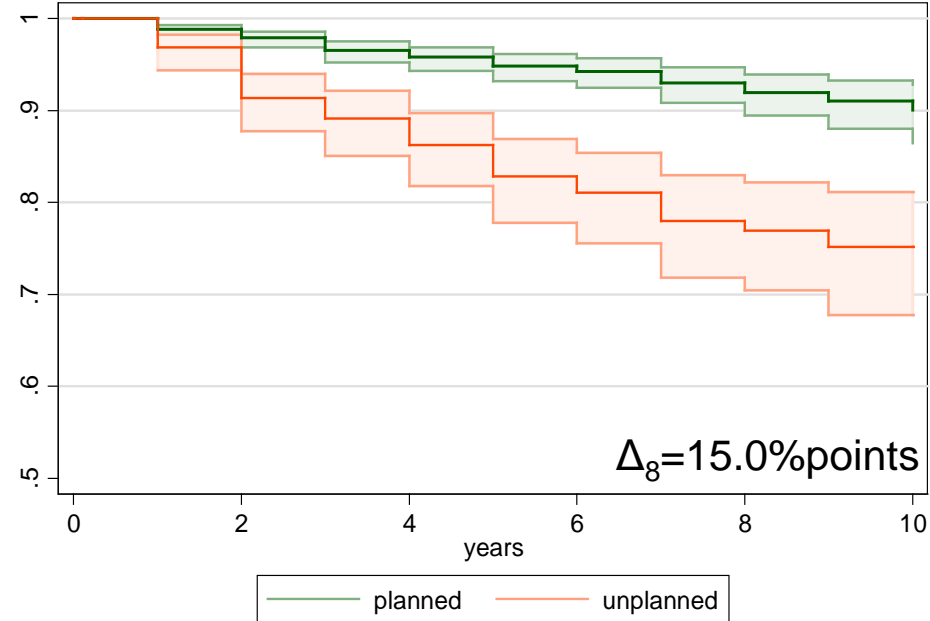
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# union stability

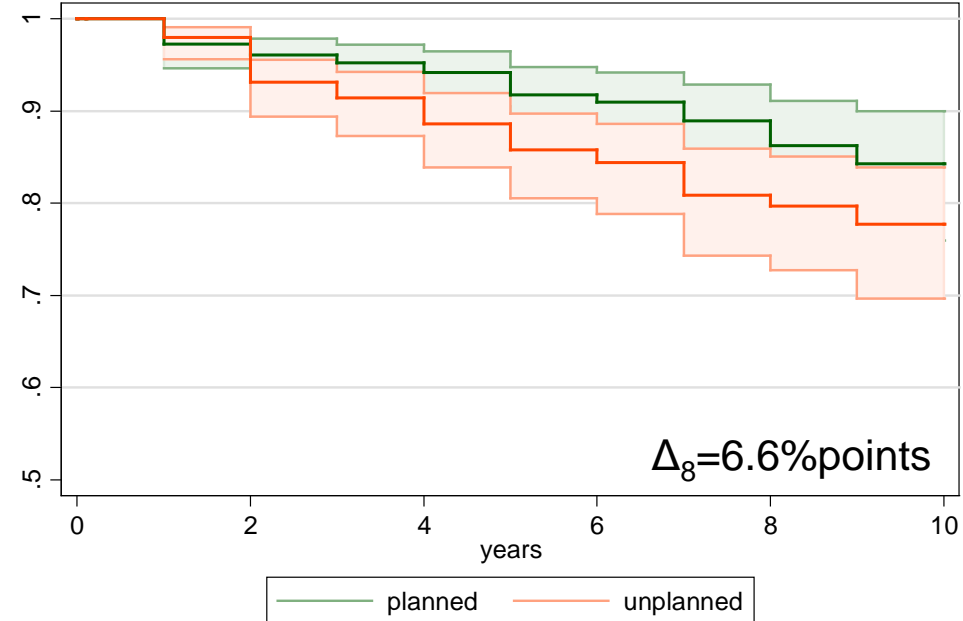
## before

## after PSM

Kaplan-Meier survival estimates



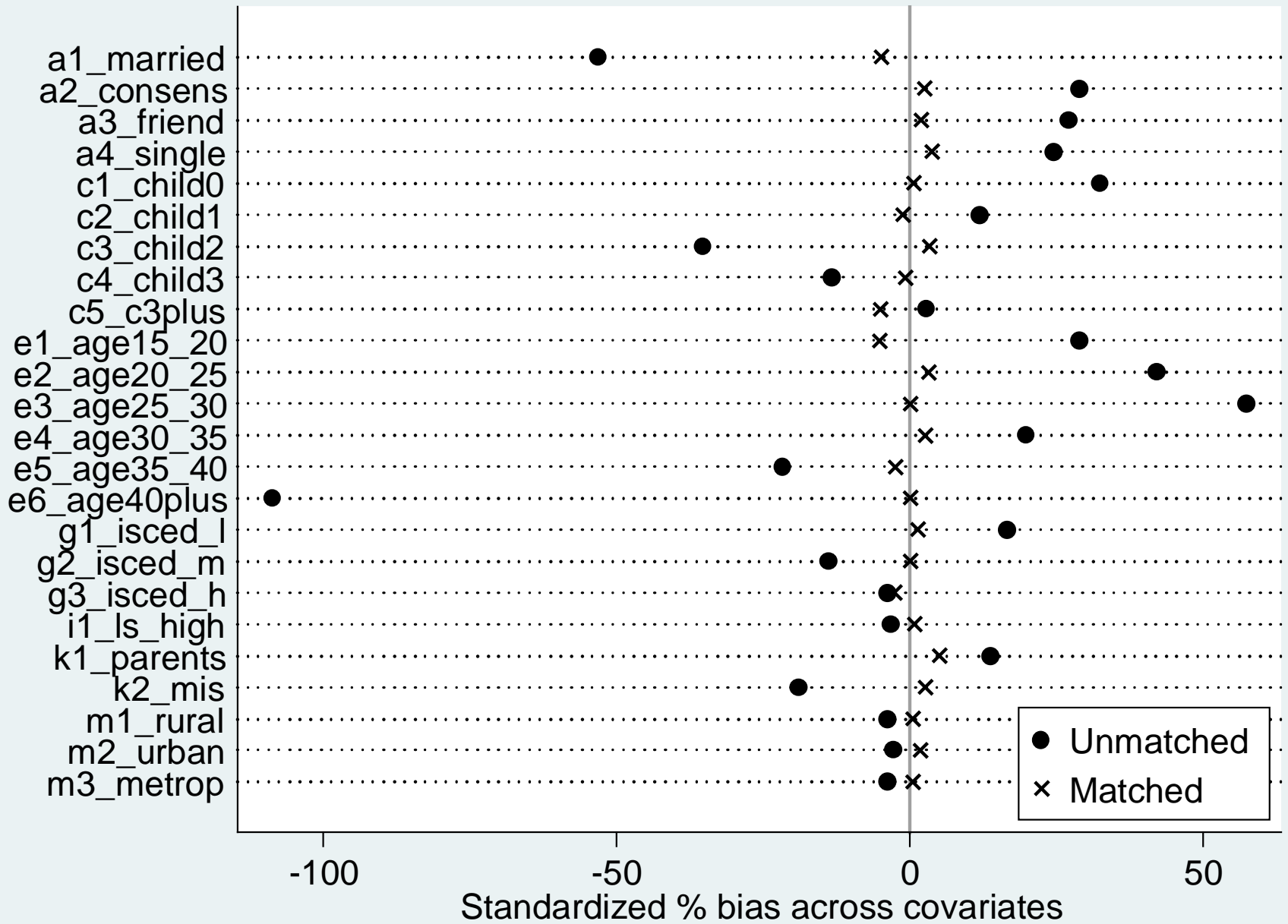
Kaplan-Meier survival estimates



Sources: SOEP. v30; own calculations.

## PSM Unplanned pregnancy vs. no birth

<b>Treatment</b>	off support	on support	total
untreated (no birth)	0	33,297	33,297
treated (unplanned)	0	394	394



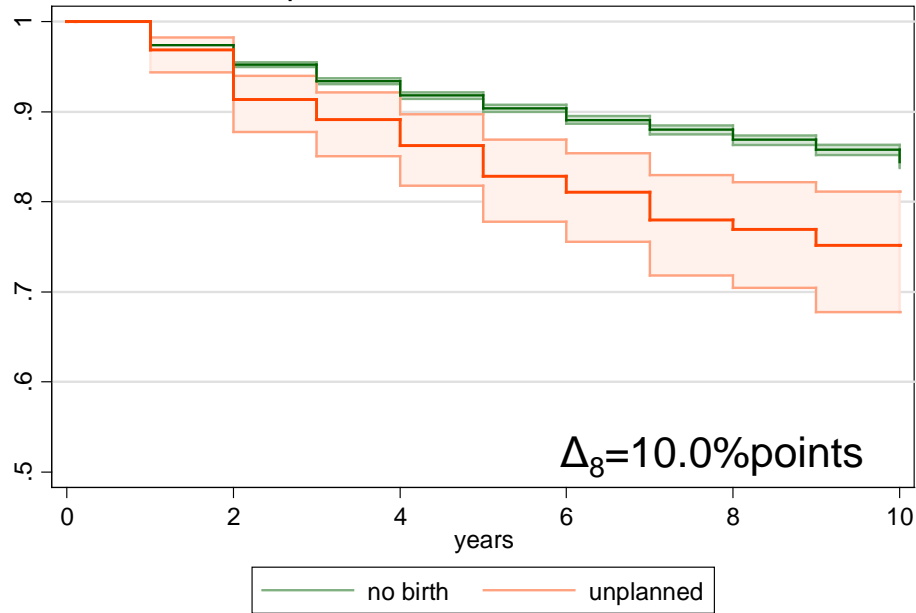
Sources: SOEP. v30; own calculations.

# union stability

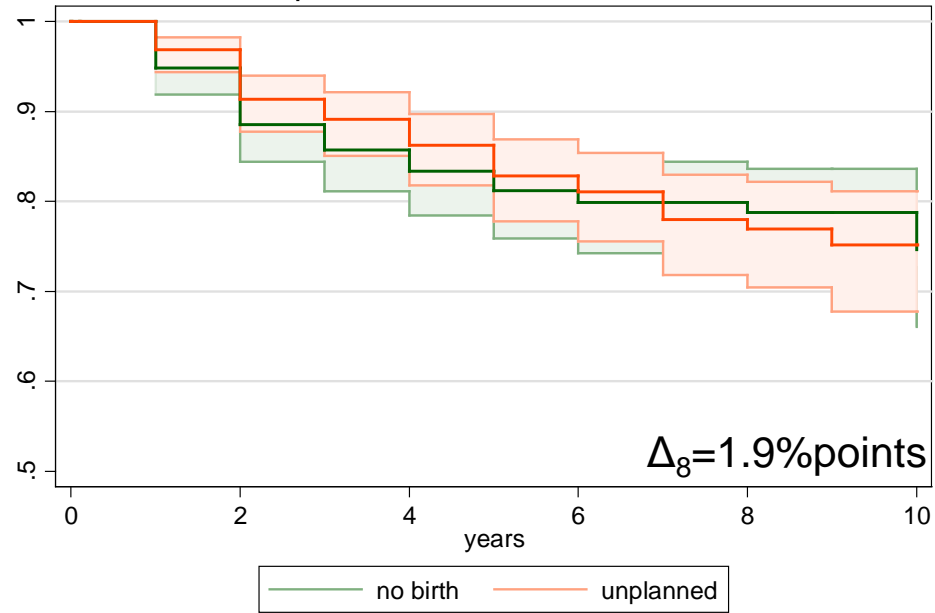
## before

## after PSM

Kaplan-Meier survival estimates



Kaplan-Meier survival estimates



Sources: SOEP. v30; own calculations.

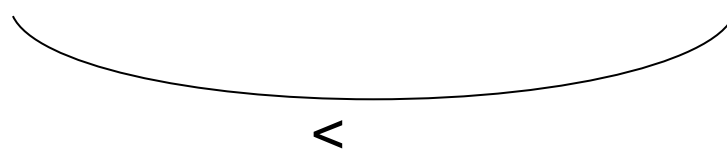
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stress: ~~PLANNED > UNPLANNED < NO BIRTH~~





## Open questions/Limitations

- retrospective information on pregnancy intentions (Ryder 1973; Trussel/Vaughan/Stanford 1999)
- abortion not covered
- partner information, including his intentions

# Literature

Becker, G.S.; E.M. Landes; R.T. Michael (1977): An Economic Analysis of Marital Instability. In: *Journal of Political Economy* 85 (6), pp. 1141-1187.

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# Literature

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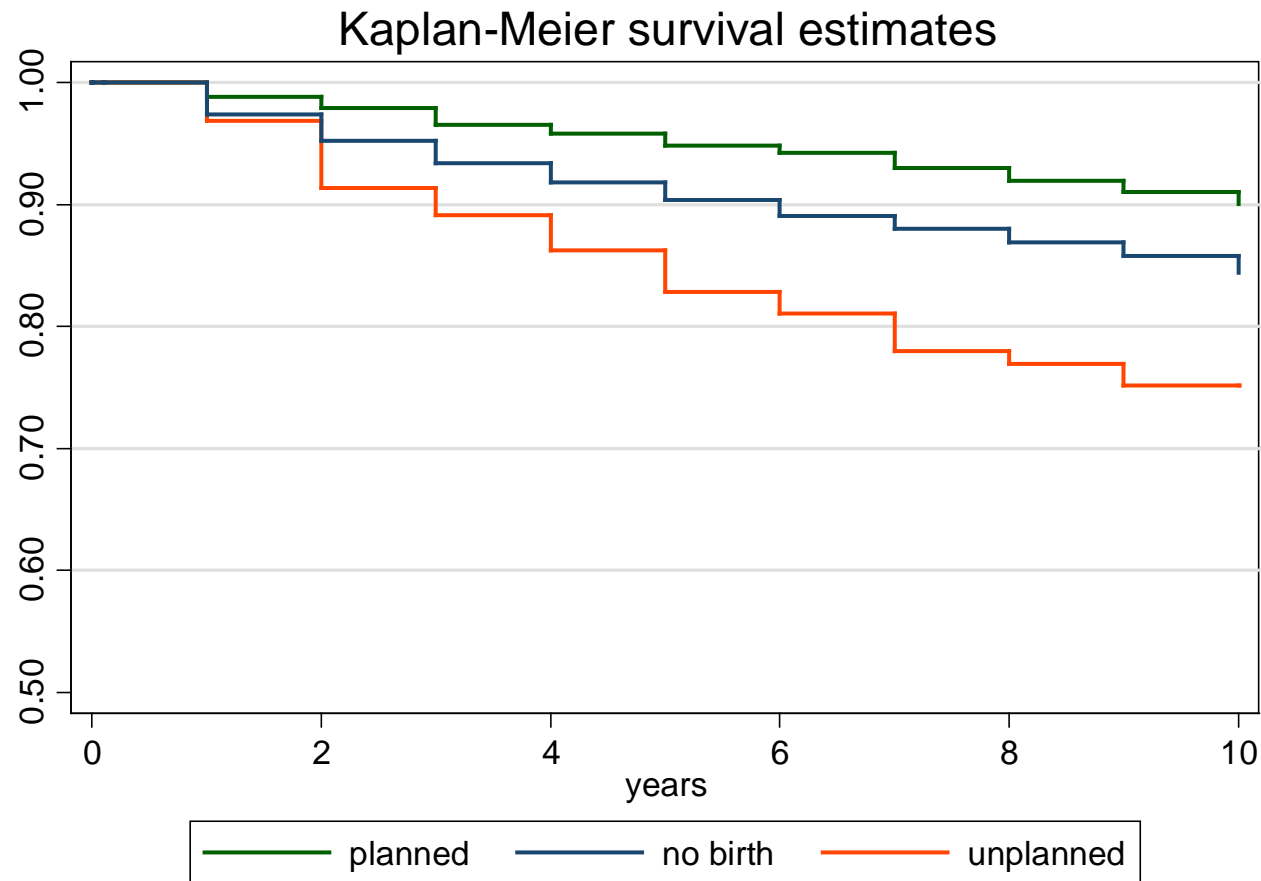
Wiik, K.A.; E. Bernhardt; T. Noack (2009): A Study of Commitment and Relationship Quality in Sweden and Norway. In: *Journal of Marriage and Family* 71 (3), pp. 465-477.

# Appendix

	unplanned vs. planned (union after birth)		unplanned vs. no birth (union after birth)	
relationship (married)				
consensual union	0.730***	0.648***	0.435**	0.265+
partner	1.008***	0.767**	-0.092	0.395+
no friend	2.288***	1.854***	-0.629**	0.704**
missing	1.644*	1.126	1.040+	2.042*
Previous kids (0)				
1	0.383**	0.415**	0.929***	0.789***
2	1.819***	1.876***	0.935***	0.607**
3	2.206***	2.316***	1.130***	0.826***
	(0.301)	(0.313)	(0.231)	(0.250)
>3	1.950***	2.072***	1.718***	1.648***
age (25-30)				
15-20	1.170***	1.294**	-0.269	0.474+
20-25	0.246	0.251	-0.056	0.096
30-35	-0.260+	-0.264	-0.790***	-0.943***
35-40	-0.015	0.008	-1.690***	-1.842***
40-100	0.553	0.612	-3.855***	-4.129***
ISCED (low)				
middle	-0.317+	-0.170	-0.211	-0.108
high	-0.357+	-0.284	0.174	0.206
missing	0.363	0.416	0.396	0.495
Unemployed	0.599*	0.668*	0.412*	0.418*
life satisf	-0.496**	-0.460*	-0.323**	-0.160
rather high	(0.168)	(0.183)	(0.115)	(0.138)
childhood (not both)				
both	0.433*	0.366+	0.172	-0.022
missing	-0.089	-0.125	-0.037	-0.230+
region (rural)				
urbanized	-0.324+	-0.319+	-0.217	-0.142
city	-0.184	-0.274+	-0.172	-0.155
_cons	-1.302***	-1.417***	-4.027***	-3.493***
N	1896	1755	70394	35403
pseudo R <sup>2</sup>	0.171	0.135	0.103	0.146

Standard errors in parentheses  
+  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# union stability (before PSM)



Sources: SOEP. v30; own calculations.