



DO CHILDREN FROM PREVIOUS RELATIONSHIPS REALLY ACT AS AN IMPEDIMENT FOR CHILDBEARING?

The transition to re-partnering and childbearing after divorce as related processes
- *First results* -

*Christine Schnor, Sofie Vanassche,
Inge Pasteels, Edmund Njeru Njagi,
Geert Molenberghs & Jan Van Bavel*

Corresponding author: christine.schnor@soc.kuleuven.be



Motivation

Post-divorce life course increasingly important

- Proportion of ever divorced persons has increased
- Separated persons: partnership and fertility trajectories
- Children: single-parent families, step-families, blended families

Lack of research

Previous research considered post-divorce fertility and partnership outcome separately

Here:

- consider partnership and fertility decisions as related processes
- consider selection of childbearing-prone women into post-divorce partnerships

Empirical background

Do children influence the woman's chance to repartner after divorce?

YES. Mothers are often found to have a lower likelihood to repartner than childless women

[Beaujouan 2012; Bumpass et al. 1990; de Graaf and of & Kalmijn 2003; Ivanova et al. 2013]

Do children from previous relationships act as an impediment for post-divorce childbearing?

YES. The number of children from the first marriage decrease the risk of a post-divorce conception

[e.g. Brown 2000, Meggiolaro & Ongaro, 2010; Wineberg, 1990]

NO. Children from previous union do not effect subsequent fertility

[e.g. Berrington & Diamond 1999]

Theoretical background

Parental status and post-divorce repartnering

→ Children from first marriage decrease the chances of repartnering

Parents may have less opportunities to meet a new partner
may be less attractive on the partner market
may have less need for a new residential partner
[De Graaf & Kalmijn 2003; Vanassche 2013: 79]

Parental status and post-divorce fertility

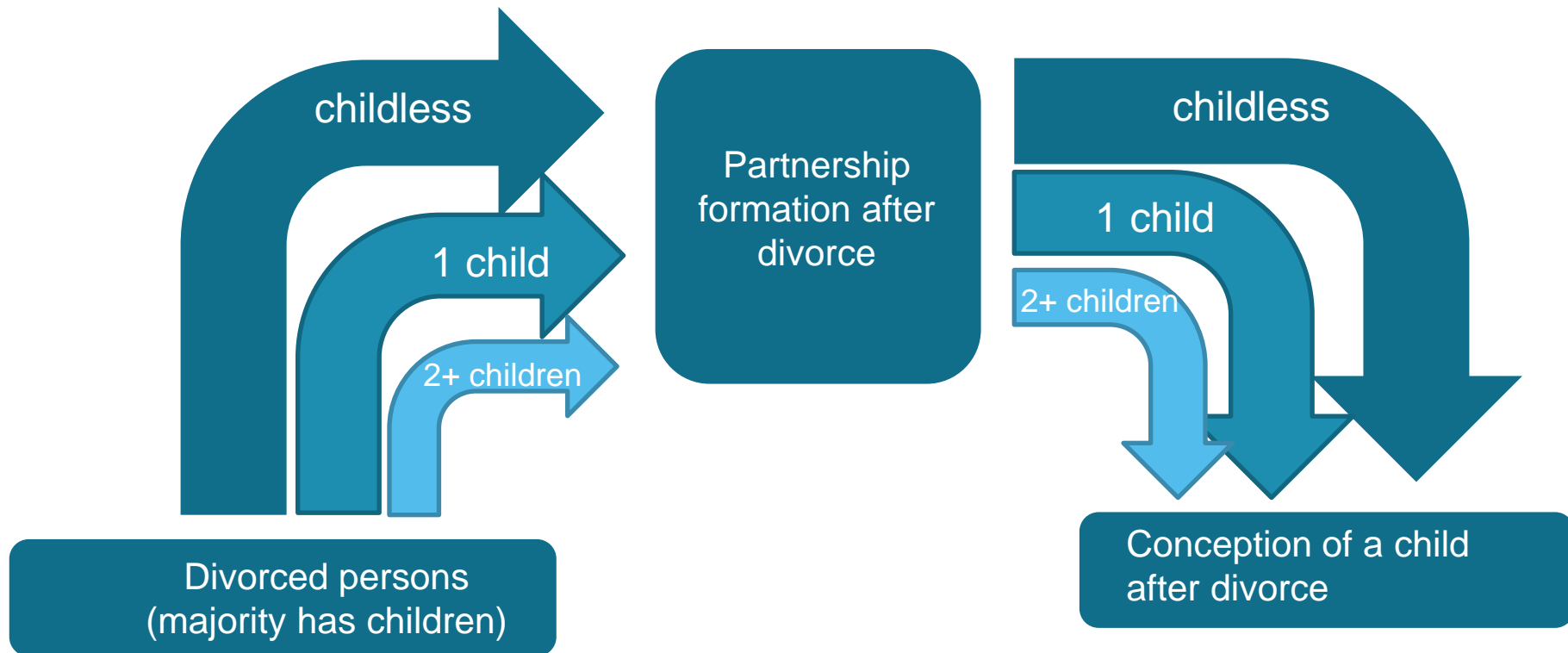
Negative effect: Parents have already satisfied their wish to have children
(Parenthood hypothesis)

Positive effect: Parents want a sibling for a single child from a previous union
(Sibling hypothesis)

No effect: New partners want to have a shared biological child as a relational capital or as the confirmation of the union
(Commitment hypothesis)

Theoretical Background

Parental status, post-divorce repartnering and fertility



Hypothesis

Considering the selection of childbearing-prone women into post-divorce partnerships gives a better estimate of the children's effect on post-divorce fertility.

(Adapted parenthood and sibling hypothesis)

The negative gradient in the effect of first-marriage fertility on post-divorce fertility should become stronger, when the repartnering chances are controlled for.

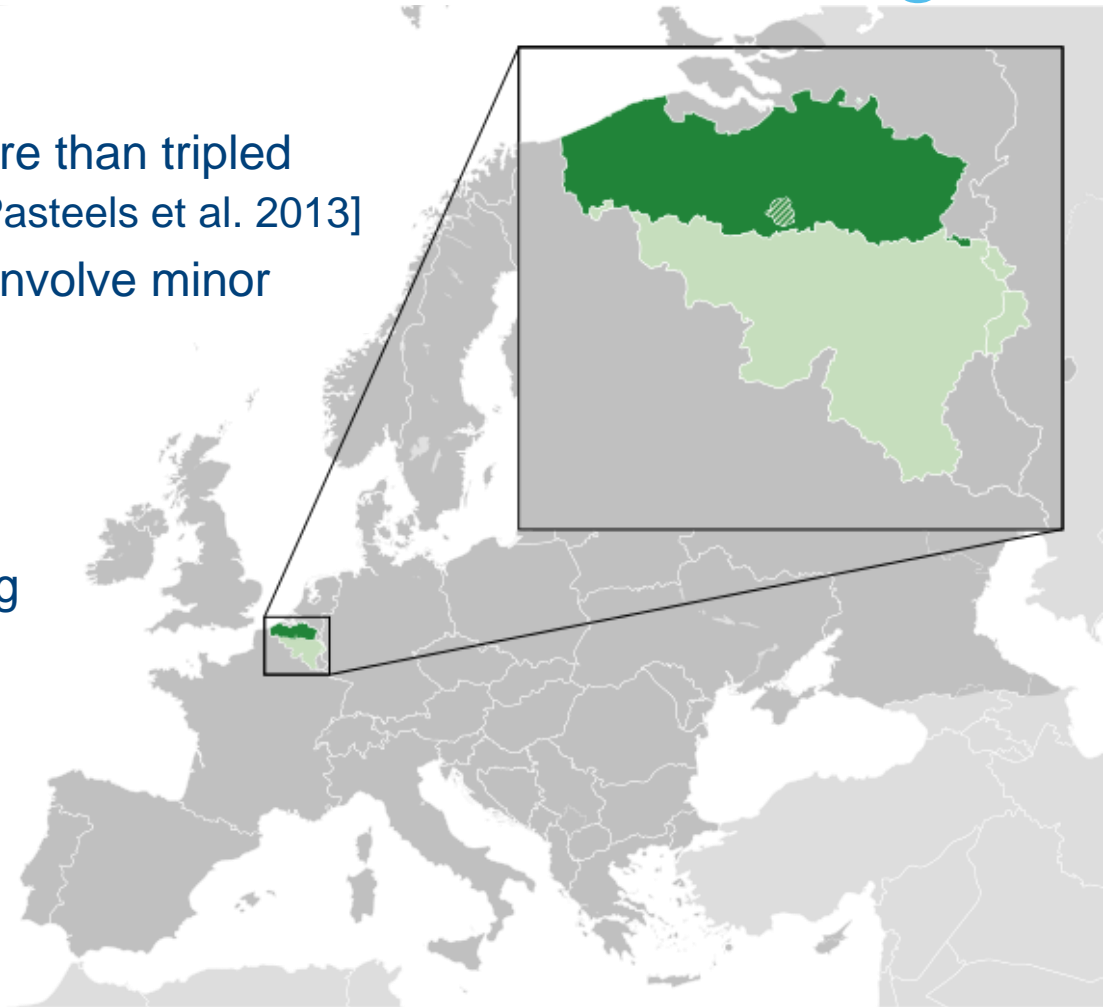
Country background – Flanders/Belgium

Belgium

- The crude divorce rate more than tripled between 1970 and 2011 [Pasteels et al. 2013]
- Two out of three divorces involve minor children [Corijn 2005]

Focus on Flanders

- Northern, Flemish speaking part of Belgium



Methods

Smoothed hazard estimates

Lognormal survival models [Roodman 2011, Bartus & Roodman 2014]

= Interval-censored regression of log failure times with jointly normal distributed error terms, accelerated failure time metric

- allows cross-equation correlation in modeling errors
- estimated with *Stata* command `cmp`

→ **Heckman-selection models** [Heckman 1978]

The survival model (fertility) is estimated only for partnered individuals

→ **Multilevel multiprocess hazard models**

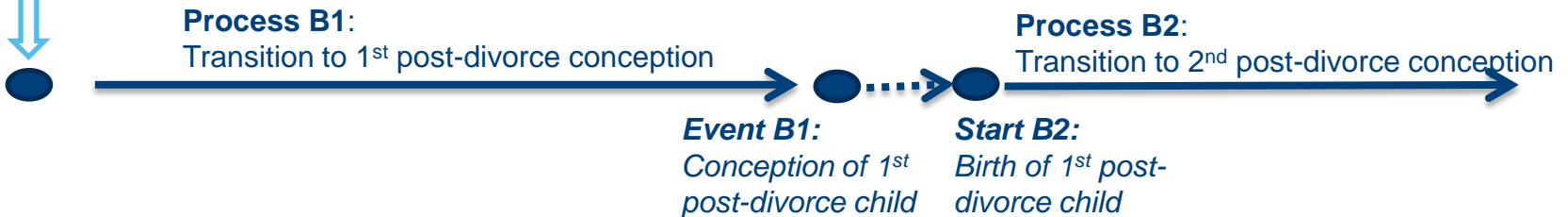
- Estimate endogeneity and selection effects [Lillard 1993]

Model design

Process A: post-divorce repartnering



Process B: post-divorce conception



Model design

- **Multivariate model set up: Transition to a post-divorce birth**

Model1: Lognormal hazard models for 1st and 2nd post-divorce birth

Model 2+3: Multilevel lognormal hazard model:
post-divorce birth (1st or 2nd), with individual random intercept

Model 4+5: Heckman-Selection model:
- Selection into first post-divorce partnership & post-divorce births
- Selection into second post-divorce partnership & post-divorce births

Model 6+7: Multiprocess-multilevel lognormal hazard models:
Transition to a post-divorce partnership and a post-divorce birth
-Interaction of process order and fertility status at time of divorce

Data & Sample

Data 'Divorce in Flanders' (2009-10): sample of Flemish divorced and married couples

Sample Divorced females

- followed until the age of 45 or max.10 years after last entry
- at risk of a first or second post-divorce partner
- at risk of a first or second post-divorce birth

Covariates

- divorce cohort
- age at entry into observation
- number of children from dissolved marriage
- education

Data & Sample

Sample description

1719 divorced women

- 1719 at risk of having a first post-divorce partner
- 255 at risk of having a second post-divorce partner

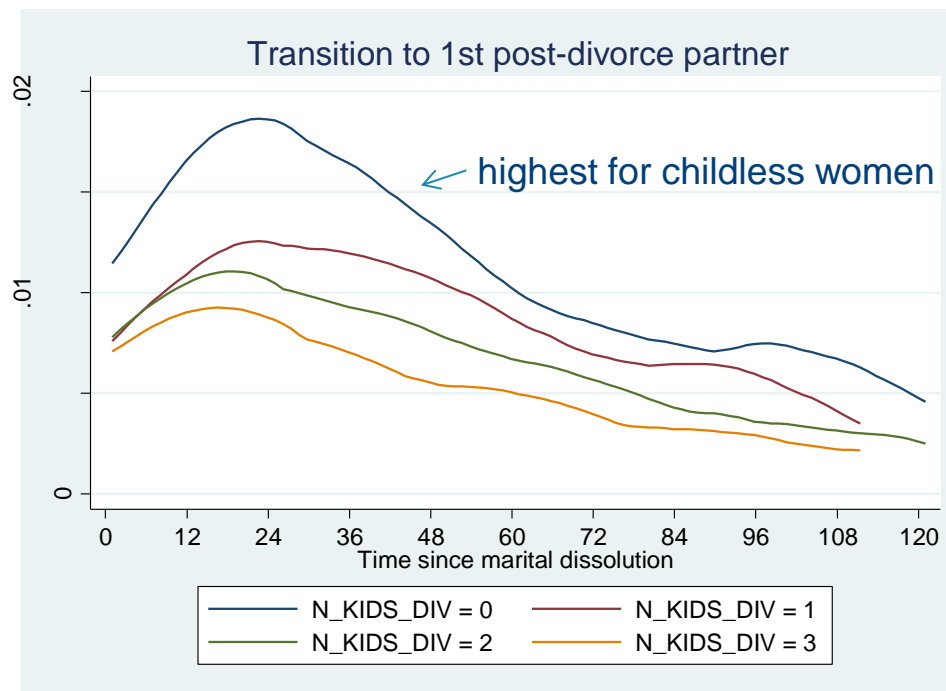
- 1719 at risk of having a first post-divorce conception
- 458 at risk of having a second post-divorce conception

Descriptive results

Post divorce repartnering & children

Smoothed hazard estimates by women's parity

- First repartnering process



Descriptive results

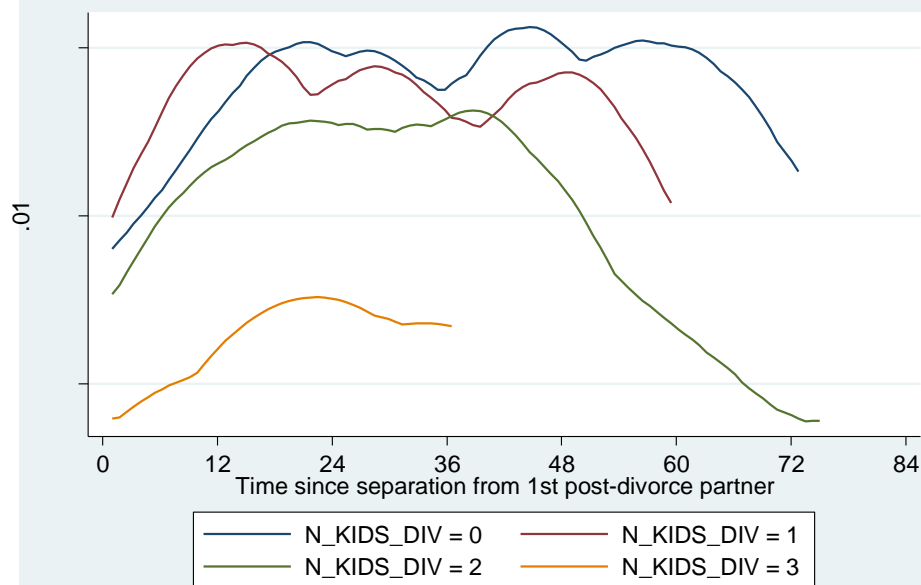
Post divorce repartnering & children

Smoothed hazard estimates by women's parity

- **Second repartnering process**

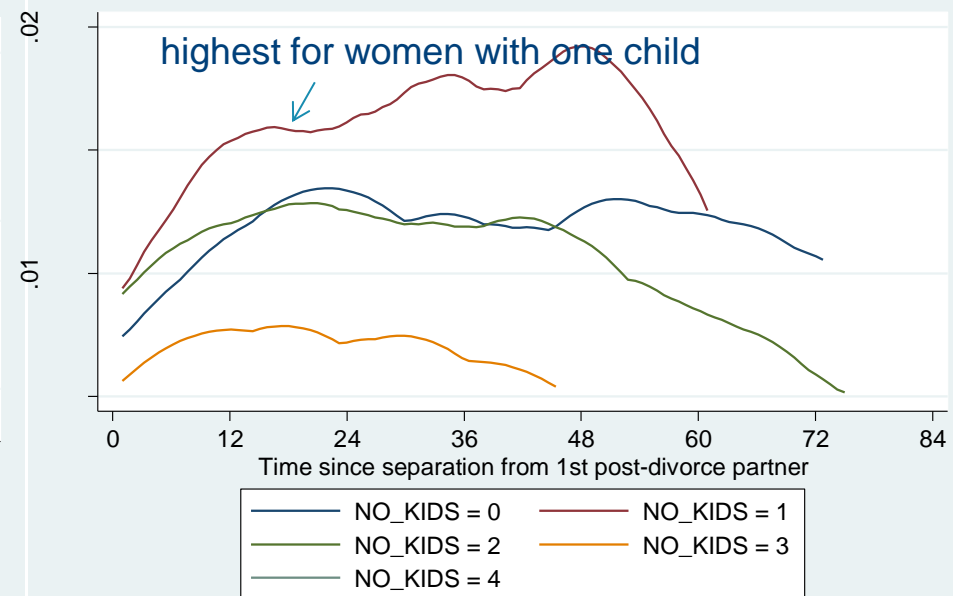
Repartnering by number of children from first marriage

Transition to second post-divorce partner



Repartnering by number of children at the time of last partnership dissolution

Transition to 2nd post-divorce partner

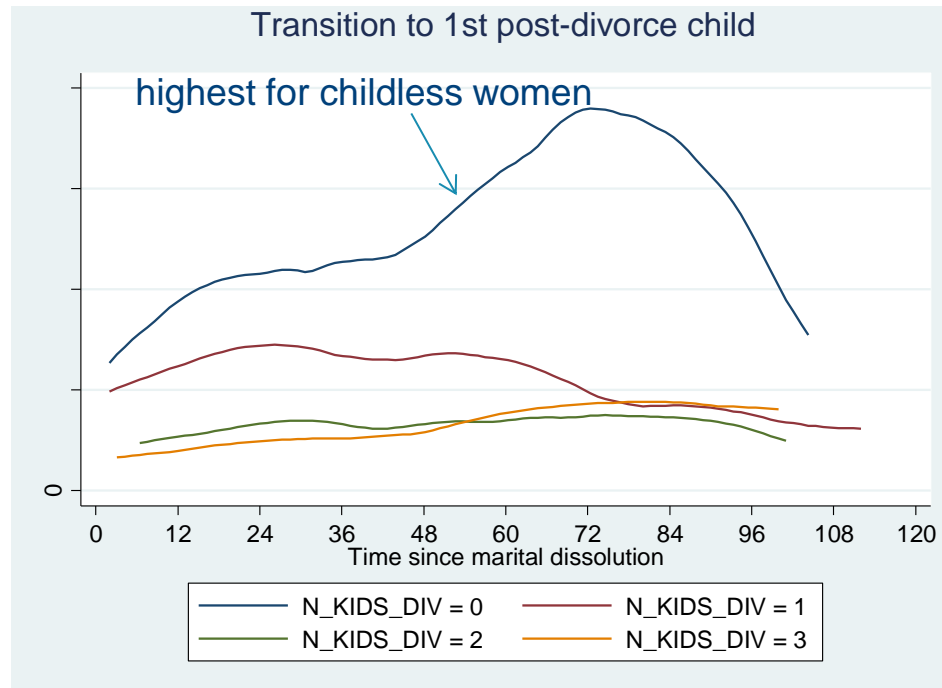


Descriptive results

Post-divorce conception & children

Smoothed hazard estimates by women's parity, adjusted for parental status of the new partner

- First fertility process



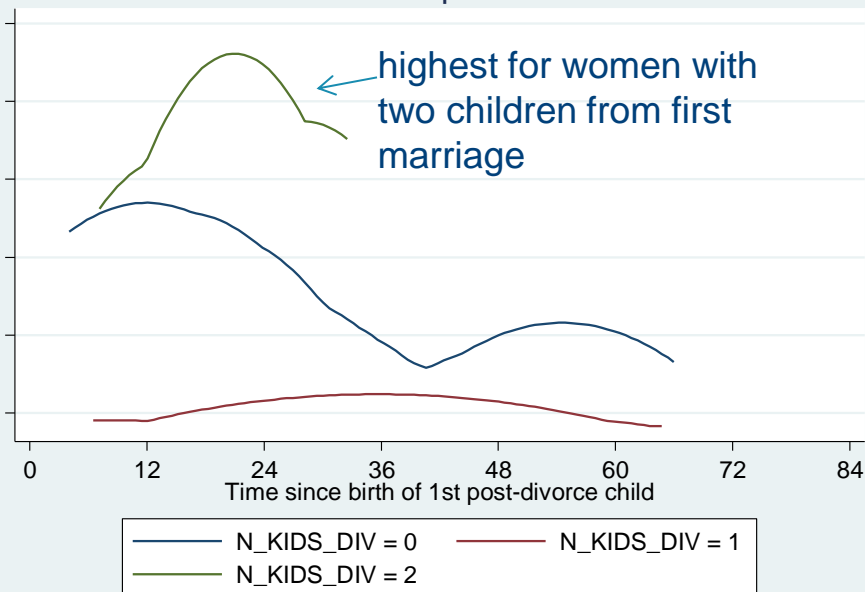
Descriptive results

Post-divorce conception & children

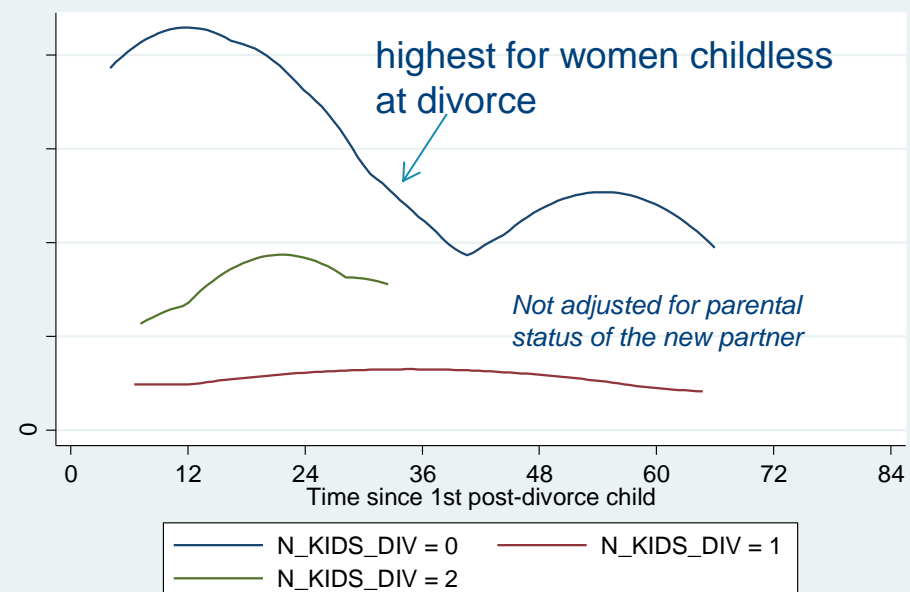
Smoothed hazard estimates by women's parity, adjusted for parental status of the new partner

- Second fertility process

Transition to 2nd post-divorce child



Transition to 2nd post-divorce child



Multivariate Results

Transition to a post-divorce child: separate equations
lognormal hazard model

	1. Model 1 st birth	2. Model 2 nd birth
Number of children from first marriage (ref=0)		
1	0.55*** (s.e.0.13)	0.56** (s.e.0.24)
2	0.64*** (s.e.0.13)	1.36*** (s.e.0.28)
Divorce cohort (ref=1981-1990)		
1991-2000	-0.33**	0.10
2001-2005	-0.28	0.15
Educational level (ref=low)		
middle	-0.11	-0.28
high	-0.07	-0.52**
Age at the time of marital dissolution/first post-divorce childbirth		
	0.10***	0.07***
In a post-divorce partnership		
	-0.57***	-0.41*
Partner has children		
	0.45***	0.84***
Missing information		
	0.54***	0.54**
_cons	5.34***	4.93***

Interpretation of the coefficients:

Positive coef.: longer waiting time to event

Negative coef.: shorter waiting time to event

Multivariate Results

Transition to a post-divorce child:
A “simple” multilevel lognormal hazard model

		3.Model
2nd transition		0.40***
Number of children from first marriage (ref=0)		
	1	0.68*** (s.e.0.13)
	2	0.92*** (s.e.0.13)
Divorce cohort (ref=1981-1990)		
	1991-2000	-0.25*
	2001-2005	-0.22
Educational level (ref=low)		
	Middle	-0.14
	high	-0.19
Age at the time of marital dissolution/first post-divorce childbirth		0.10***
	Partner has children	0.63***
	Missing information	0.56***
	In a post-divorce partnership	-0.53***
	_cons	4.93
Random effects		
	Individual level	***
	Residual	***

Interpretation of the coefficients:

Positive coef.: longer waiting time to event

Negative coef.: shorter waiting time to event

Multivariate Results

Transition to a post-divorce child:
Heckman selection: 1

4.Model		
	Post-divorce fertility (selection hazard model)	First post-divorce repartnering process (probit)
2nd transition	0.07	
Number of children from first marriage (ref=0)		
1	0.42*** (s.e.0.13)	-0.17** (s.e. 0.08)
2	0.50*** (s.e.0.14)	-0.22*** (s.e. 0.08)
Divorce cohort (ref=1981-1990)		
1991-2000	-0.21	0.14
2001-2005	-0.27	0.15
Educational level (ref=low)		
middle	-0.27*	0.06
high	-0.47***	0.23***
missing	-0.79	0
Age at the time of marital dissolution/first post-divorce childbirth	0.12***	-0.08***
Partner has children	0.56***	
Missing information	0.47***	
_cons	4.96	
Cross-correlation	0.17	

Multivariate Results

Transition to a post-divorce child:
Heckman selection: 2

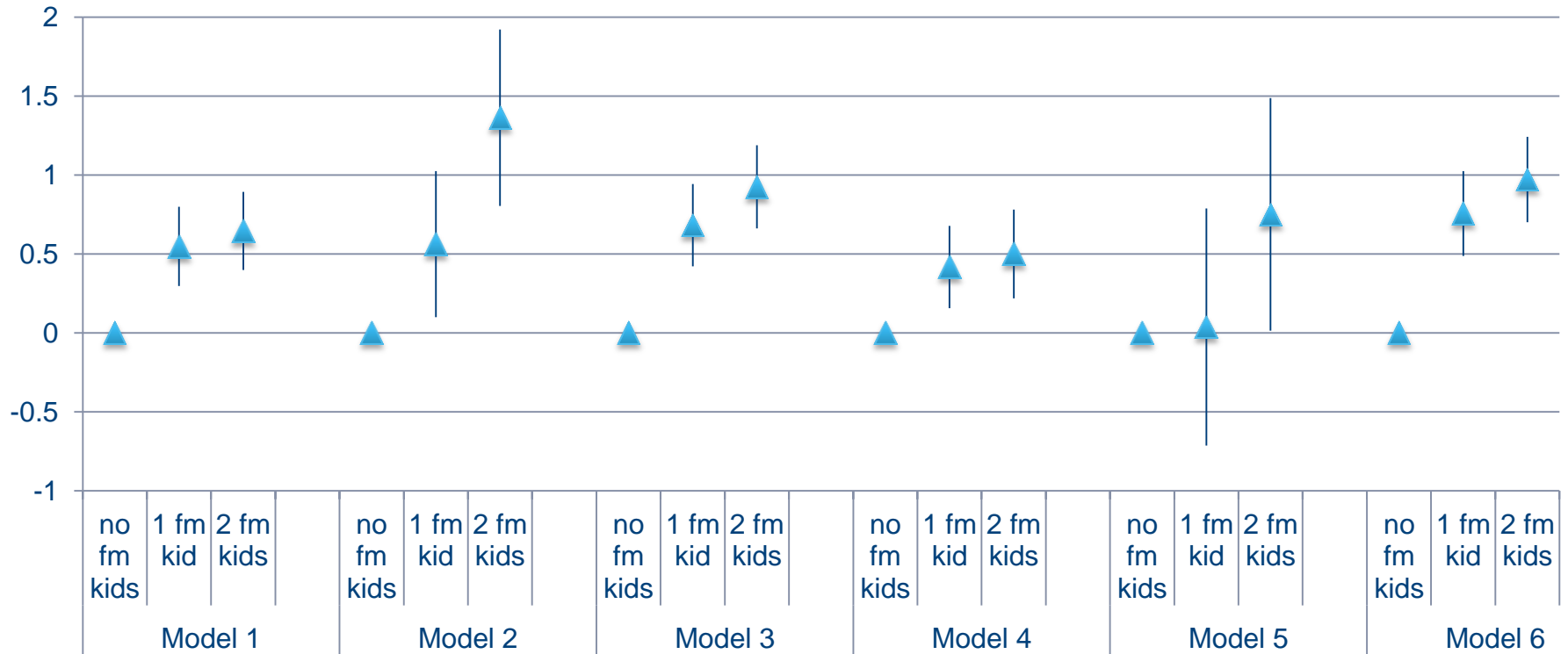
5.Model		
	Post-divorce fertility (selection hazard model)	Second post-divorce repartnering process (probit)
2nd transition	-0.02	
Number of children from first marriage (ref=0)		
1	0.04 (s.e.0.38)	-0.06 (s.e. 0.19)
2	0.75** (s.e.0.38)	-0.13 (s.e. 0.19)
Divorce cohort (ref=1981-1990)		
1991-2000	-0.12	0.16
2001-2005	-0.37	0.00
Educational level (ref=low)		
middle	-0.02	-0.22
high	-0.29	-0.02
missing	-/-	-/-
Age at the time of marital dissolution/first post-divorce childbirth	0.01	-0.10***
Partner has children	1.49*	
Missing information	-0.10	
_cons	4.88	0.62***
Cross-correlation	0.14	

Multivariate Results

Transition to a post-divorce child:
Multilevel-multiprocess modeling

6.Model		
	Post-divorce fertility (multilevel hazard model)	Post-divorce repartnering (multilevel hazard model)
2nd transition	-0.26**	0.50***
Number of children from first marriage (ref=0)		
1	0.76*** (s.e. 0.13)	0.49*** (s.e. 0.13)
2	0.97*** (s.e. 0.13)	0.47*** (s.e. 0.13)
Divorce cohort (ref=1981-1990)		
1991-2000	-0.27*	-0.02
2001-2005	-0.24	-0.17
Educational level (ref=low)		
middle	-0.14	0.07
high	-0.23	0.06
missing	-/-	-/-
Age at the time of marital dissolution/first post-divorce childbirth	0.11***	-0.04***
Partner has children	0.75***	
Missing information	-0.10	
_cons	4.88	3.56***
Cross-correlation	0.48***	

Multivariate Results - Summary



1 st birth	2 nd birth	1 st + 2 nd birth (+ ind.effects)	Heckman (1 st partner)	Heckman (2 nd partner)	Multiprocess
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fm kids = children from first marriage

Conclusion

- Having first-marriage children negatively affects post-divorce childbearing.
- Evidence for the parenthood and sibling hypothesis.

Women with children have lower chances of repartnering. Looking only on the fertility transitions of women in post-divorce partnerships, the negative gradient in the effect of first-marriage fertility on post-divorce fertility is underestimated.

Next steps

- Sample:** Consider the men's perspective
- Method:** Estimating proportional hazard models (aML)
Considering other types of models used in biostatistics (e.g. multistate models)
- Children:** Test how parity and number of residential children affect transitions
Previous research showed:
- parental status is important in transition to postdivorce childbearing,
 - childrearing responsibilities are more important for repartnering [Vanassche 2013]

Thank you for your
attention!

Comments or questions?

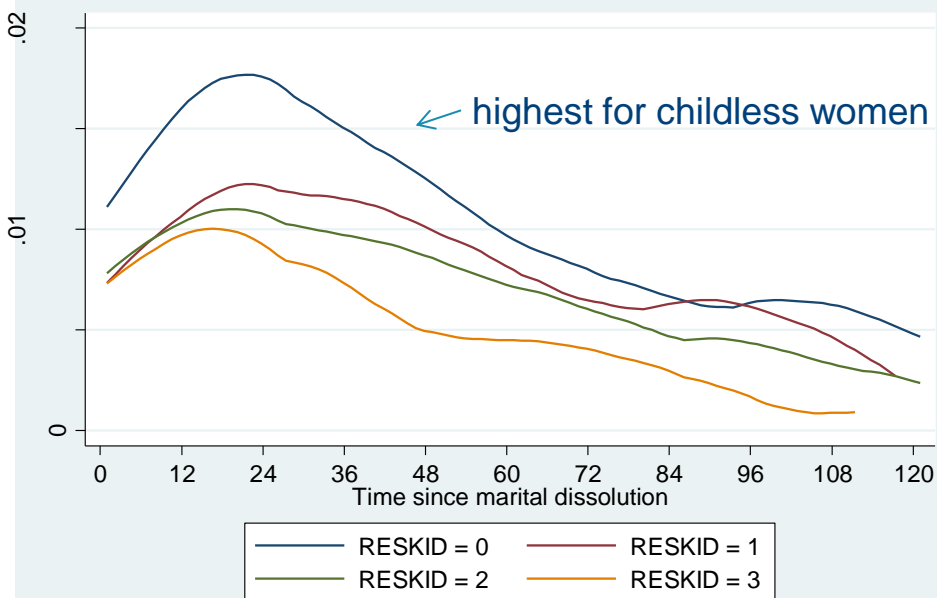
Descriptive results

Post divorce repartnering & children

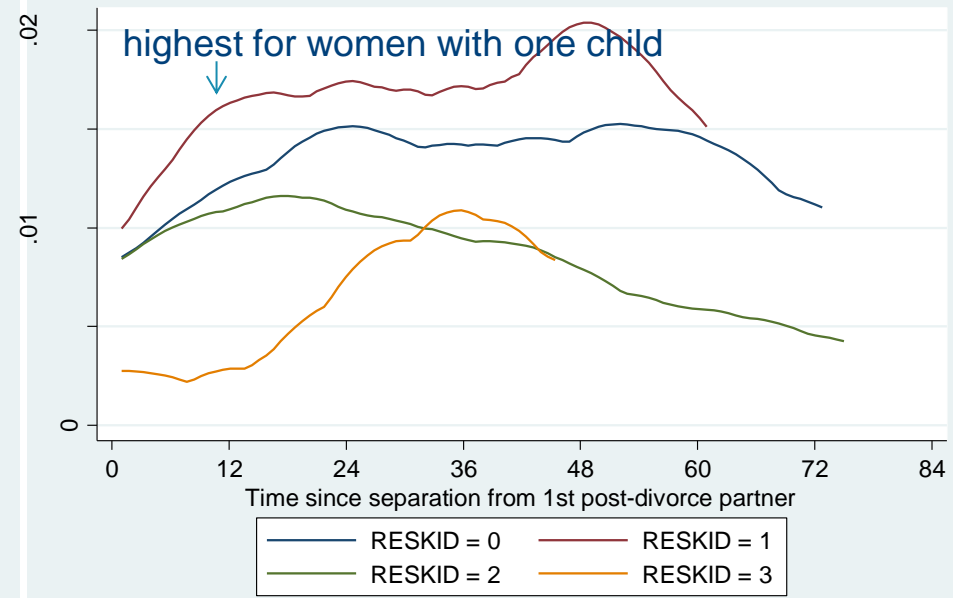
Smoothed hazard estimates by number of residential children

- First repartnering process
- Second repartnering process

Transition to 1st post-divorce partner



Transition to 2nd post-divorce partner

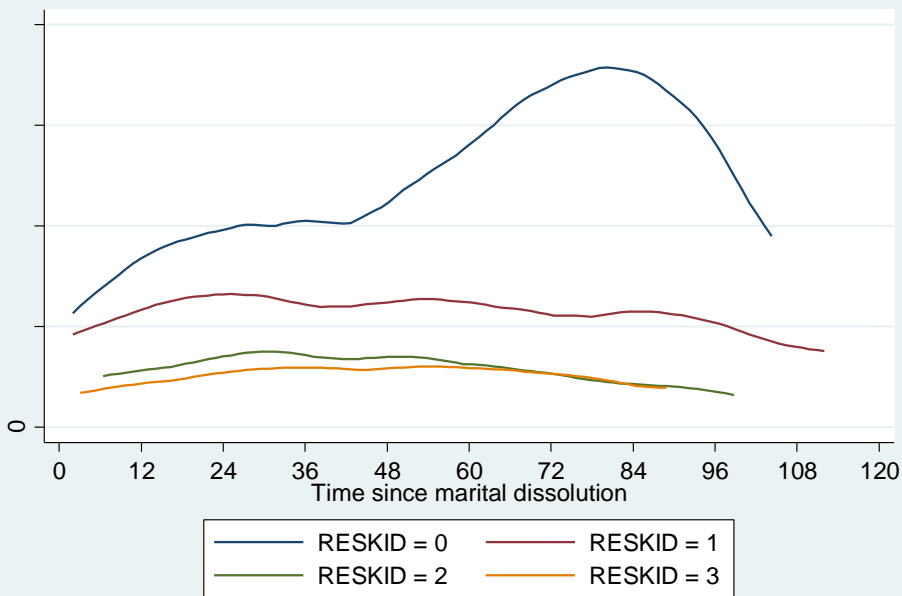


Descriptive results

Post-divorce conception & residential children:
Smoothed hazard estimates by women's parity,
adjusted for parental status of the new partner

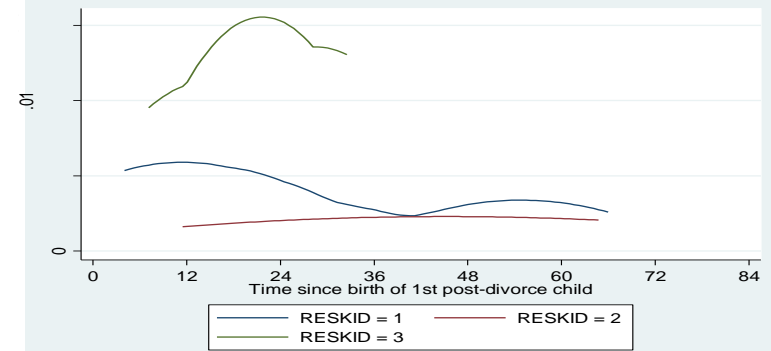
- First fertility process

Transition to 1st post-divorce child

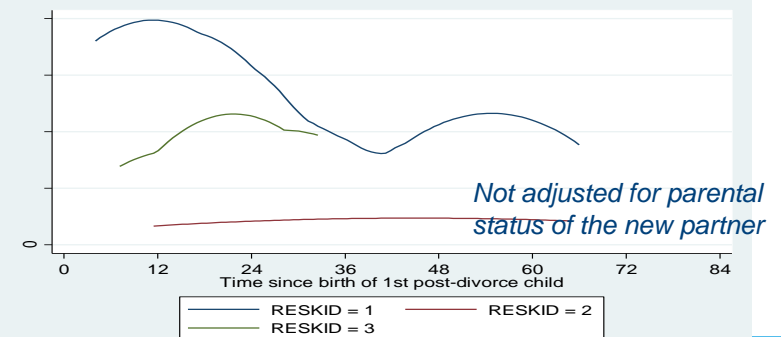


- Second fertility process

Transition to 2nd post-divorce child



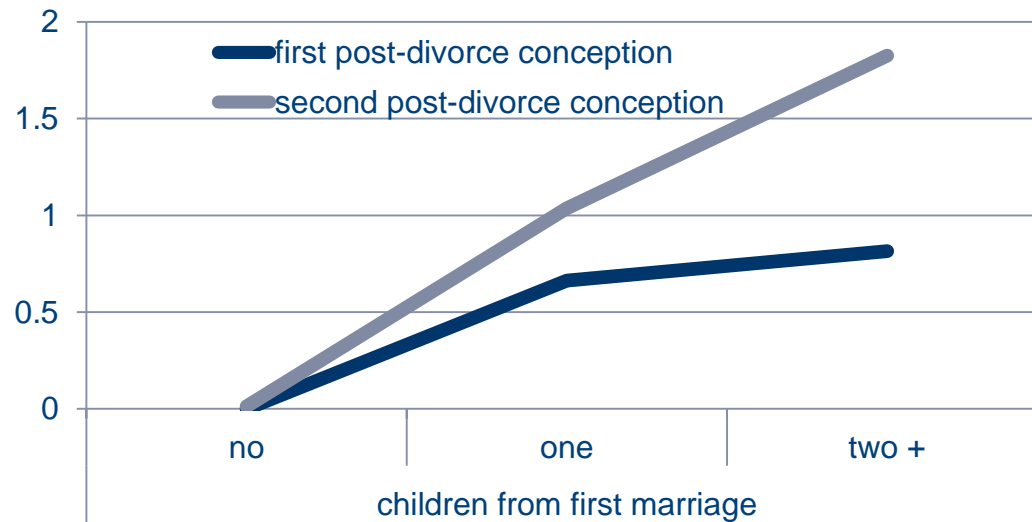
Transition to 2nd post-divorce child



Multivariate Results

Summary: Transition to a post-divorce conception

	1. Model 1 st birth	2. Model 2 nd birth	3. Model 1 st + 2 nd	4. Model + Heckman1	5. Model + Heckman2	6. Model multiprocess	7. Model + Interaction
2nd transition			0.40***	0.07	-0.02	-0.26**	0.00
Number of children from first marriage (ref=0)							
1	0.55***	0.56**	0.68***	0.42***	0.03	0.77***	0.66***
2	0.64***	1.36***	0.92***	0.50***	0.75**	1.03***	0.82***
2nd transition* 1 child							0.36
2nd transition* 2children							0.99**



Multivariate Results - Interaction

