ESRC Centre for Population Change Working Paper
Number 30

CPC
centre for population change

With or Without You
Partnership context of first conceptions and births in Hungary

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February 2013

ISSN2042-4116

E·S·R·C
ECONOMIC & SOCIAL RESEARCH COUNCIL

ABSTRACT

Using notions from the Second Demographic Transition theory and the Pattern of Disadvantage argument, I study how women's risk of a first conception within different union types (single, cohabitation, marriage) is influenced by education in Hungary and whether this influence has changed over time. Additionally, I examine the transition to marriage among women who experienced a non-marital conception. Using the first wave of the Hungarian Generations and Gender Survey from 2004, I conduct discrete time survival analyses and logistic regression. I find a positive educational gradient for single and marital conceptions while this gradient is negative for cohabiting conceptions. Highly educated women are less likely to experience a conception when single or cohabiting than when married compared to their medium educated counterparts. Furthermore, the impact of education on the risk of a single and marital conception has changed over time. Following the transition in 1990, a positive gradient of education on the risk of a single conception emerged whereas for marital conceptions the effect of education is negative. No consistent patterns are found for cohabiting conceptions. Additionally, medium educated women and those who experienced a conception while being single are more likely to marry between the conception and birth than their lower educated counterparts and those who experienced a cohabiting conception. Furthermore, highly educated women who experience a single conception are 1.4 times as likely to marry before the birth of the first child as their counterparts with medium education.

KEYWORDS

First conception; first birth; partnership context; competing risks; Hungary

EDITORIAL NOTE

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ACKNOWLEDGEMENT

An earlier version of this paper was prepared as the product of the European Doctoral School of Demography (EDSD), hosted by the Centre for Economic Demography at Lund University. The author is grateful for the financial support received from the Netherlands Interdisciplinary Demographic Institute (NIDI) while participating in EDSD. An early draft of this paper was presented as a poster presentation at the 77th Annual Meeting of the Population Association of America, 3-5 May, San Francisco, CA. The current version of the paper was prepared while the author was a PhD student at the University of Southampton, funded by the Economic and Social Research Council (ESRC). The author is grateful for financial support received from the ESRC Centre for Population Change (CPC) at the University of Southampton. Thanks to Brienna Perelli-Harris, Ann Berrington, Martin Dribe, and Mark Lyons-Amos for their comments and suggestions. The GGS data were obtained from the GGP Data Archive and refer to the publication that contains the model survey instruments: United Nations 2005. Generations & Gender Programme: Survey Instruments. New York and Geneva: UN, 2005.

The ESRC Centre for Population Change Working Paper Series is edited by Teresa McGowan

WITH OR WITHOUT YOU: PARTNERSHIP CONTEXT OF FIRST CONCEPTIONS AND BIRTHS IN HUNGARY

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1. INTRODUCTION

In the last few decades, the prevalence of alternative family forms, such as non-marital cohabitation and non-marital childbearing increased across Europe and in the United States. The increase in the proportion of births out of wedlock was mainly the result of the rising number of cohabitations and cohabiting births in most European countries (Perelli-Harris & Gerber, 2011; Perelli-Harris et al., 2010; Spéder, 2004b), except in the UK where the number of births to single mothers also increased (Kiernan, 2004).

There has been much debate about how the increasing share of non-marital births can be explained and which societal groups are experiencing these new forms of family behaviours. On the one hand, the Second Demographic Transition (SDT) theory argues that ideational and value changes contribute to changing family behaviours. Thus, liberal, individualistic and more secularised people are expected to be the forerunners of these family formation behaviours (Lesthaeghe & van de Kaa, 1986). On the other hand, using the Pattern of Disadvantage argument, some studies show that groups on the lower end of the society (i.e. those with low education and fewer resources) are more likely to give birth within cohabitation (Berrington, 2001; Perelli-Harris & Gerber, 2011; Perelli-Harris et al., 2010). If this is the case, the increasing proportion of non-marital births might contribute to the reproduction of inequalities.

This study focuses on Hungary, where a societal, political, and economic transition took place in 1990; democracy replaced socialism, market economy was implemented and norms and values of people changed. These changes affected fertility and family formation behaviours (Thornton & Philipov, 2009). For example, first births and marriages were increasingly delayed or forgone and the prevalence of cohabitation and non-marital childbearing increased (Hoem, Kostova, Jasilioniene, & Muresan, 2009). The rate of extramarital pregnancies remained very low at the 5-7% level until the 1980s when it started to increase (Pongrácz & Molnár, 2003) along with the proportion of cohabitants. Before the 1980s, most cohabitation in Hungary was post-marital, but after the mid-1980s, never-married cohabitation as well as non-marital childbearing became more common (Carlson & Klinger, 1987; Spéder, 2005). Between 1998 and 2011, the proportion of out-of-wedlock births rose dramatically from 26.6% to 42.3% in 2011. This rate is the highest among post-socialist countries

in the region (Eurostat, 2012). Yet, attention has mainly been focussed on describing rather than explaining trends in the partnership context of first births in Hungary. As a result of this, it is not clear whether non-marital conceptions are more likely to occur among people with high or low socioeconomic status in the Hungarian context. Using educational attainment as a proxy for socioeconomic status, it is possible to examine which societal groups are more likely to experience these new family forms.

Therefore, this study aims to answer the following research questions: How does education influence women's risk of a first conception within different union types (i.e. single, cohabitation, marriage) in Hungary? Has this influence changed over time? To capture possible changes in partnership status between conception and birth, I focus on first conceptions. Higher order conceptions are less likely to happen in a non-marital union as women frequently marry their partner after the first conception. This implies that partnership status at conception might not be of importance *per se* if the spouses get married between conception and birth. Therefore, this paper also investigates whether women who experienced a non-marital conception marry between conception and birth.

This study contributes to the literature in several ways. First, most previous studies on Hungary investigated which educational groups cohabiters belong to (Pongrácz & Spéder, 2003; Spéder, 2005) or how education is related to the timing of first union formation and first birth (Aassve, Billari, & Spéder, 2006; Bradatan & Kulcsár, 2008; Hoem, Gabrielli, Jasilioniene, Kostova, & Matysiak, 2010; Hoem et al., 2009). Much less attention has been paid to the relationship between education and partnership status at first conception or birth. An exception is Spéder (2004b), who found that the least educated women are the most likely to have a child in a non-marital union and within cohabitation using logistic regression models. However, he did not distinguish between first and higher order births and did not compare the risk of a single, cohabiting and marital birth by education within the same model. The present study aims to contribute to the literature by applying discrete time competing risks models.

Second, previous research did not investigate whether and how the influence of education on the risk of a single, cohabiting, and marital conception has changed over time. For example, Spéder (2004b) restricted the multivariate analyses to births that occurred after the transition in 1990. However, given the vast societal, economic and political changes after the transition, one would expect that the extent to which

education influences the partnership status of first conceptions has also changed over time. Furthermore, as previous studies indicated, some changes in partnership and family formation behaviours had already started before the transition (Carlson & Klinger, 1987; Spéder, 2005). Therefore, by examining how the effect of education on the risk of a first conception within different union types has changed over time, the present study fills a gap in the literature on Hungary.

Third, in order to be able to assess changes in partnership status between conception and birth by education, I investigate time to first conception (rather than to first birth as was done by Spéder (2004b)). This is essential as the partnership status of spouses often changes between conception and birth. If this is the case, partnership status at conception may be less important than at birth. Furthermore, there might be educational differences in the decision to marry following a non-marital conception.

To sum up, the present study contributes to the literature by applying discrete time competing risks analyses to examine the risk of a first conception within different union types in Hungary, differentiating between cohabiting and single non-marital conceptions. Furthermore, I examine possible changes over time in the influence of education on the risk of a first conception within different union types. Last, studying first conceptions as opposed to first births allows for examining changes in partnership status between conception and birth by education.

2. THEORY AND HYPOTHESES

2.1 SECOND DEMOGRAPHIC TRANSITION VERSUS PATTERN OF DISADVANTAGE

From the 1960s, major demographic changes took place in Western Europe: the quantum of fertility was declining, marriage and childbearing were being postponed, new living arrangements were adopted, the proportion of married people was decreasing while the proportion of cohabiting couples was increasing, as did the proportion of births out of wedlock (Frejka, 2008; Lesthaeghe & Moors, 2000; Lesthaeghe & Neidert, 2006; Van de Kaa, 2002). Theorists of the Second Demographic Transition (SDT) argue that these changes were not only demographic in their nature but they were also linked to changes in peoples' values (Lesthaeghe & van de Kaa, 1986). As a result of increasing living standards, weakened normative regulations, increasing gender equality and female autonomy, people discovered their

need for self-development and self-fulfilment. The new lifestyle choices, related to the rise of "higher order needs" (Maslow, 1954) and self-realisation led to changes in family formation behaviours (Surkyn & Lesthaeghe, 2004).

Although the SDT does not offer an explicit explanation for how ideational changes are related to the increasing proportion of non-marital births, from its arguments it follows that more egalitarian people with more secular values would engage in new living arrangements to fulfil their needs of self-development and individualism (Lesthaeghe & Neidert, 2006; Surkyn & Lesthaeghe, 2004). In other words, more liberal people are more likely to choose to cohabit with a partner without being married, live alone, or have a baby within a non-marital union. Previous research interpreted the diffusion of new family behaviours, including non-marital childbearing and cohabitation, as support for the SDT in the United States (Lesthaeghe & Neidert, 2006; Raley, 2001) and in Western Europe (Lesthaeghe, 2010; Lesthaeghe & Moors, 2000; Surkyn & Lesthaeghe, 2004; Van de Kaa, 2002).

The SDT was originally formulated to understand changing family behaviours in the United States and in Western Europe, as countries belonging to the Soviet bloc had completely different experiences. For example, when the baby boom was occurring in Western Europe, Central and Eastern European countries were experiencing fertility decline. In the 1970s and 1980s, due to pro-natalist policies, the centrally planned economy, and full employment (of both men and women), fertility rates stabilised around replacement level in Hungary. Furthermore, early and universal marriage, low age at childbearing, high rates of first and second births as well as low rates of childlessness characterised the country (Frejka, 2008; Hoem et al., 2009). In Hungary, changes in values were reinforced by the socialist regime; the society became atomised and demobilised, and people drew back to the privacy of family life (Beluszky, 2000). After the mid-1960s, the system has softened and the importance of consumption increased although there were limited consumption possibilities (Sobotka, 2008). Moreover, there was a general acceptance and imitation of "Western norms" and lifestyles which were associated with modern life and economic prosperity (Sobotka, 2008; Thornton & Philipov, 2009). After the fall of the Soviet Union and with the implementation of the market economy, uncertainty, anomie, job insecurity, and unemployment characterised Hungarian society (Spéder, 2004a, 2006). At the same time, demand for highly educated people, and professional and leisure time opportunities emerged. The society was left with weakened norms

and institutions; therefore people were ready to adjust their behaviours to the new circumstances (Beluszky, 2000; Frejka, 2008).

Thus, after the transition, the Hungarian society became more similar to Western European countries (Spéder, 2003). The increased consumption possibilities allowed higher educated people to develop higher order needs and in order to be able to fulfil them they might have chosen alternative ways of family formation. Thus, the SDT anticipates that higher educated people are more likely to experience a single or cohabiting conception than a marital conception compared to their lower educated counterparts. Consequently, lower educated people would be more likely to conceive within marriage than in cohabitation or while being single compared to higher educated people.

On the contrary, it might be that cohabitation and non-marital childbearing reflect structural differences and circumstances rather than ideational choices. In other words, those with lower socioeconomic status tend to establish families in these alternative settings (Berrington, 2001; Perelli-Harris & Gerber, 2011; Perelli-Harris et al., 2010). Indeed, studies in the United States (Bumpass & Lu, 2000; Seltzer, 2004; Thornton, Axinn, & Teachman, 1995), UK (Berrington, 2001; Ermisch & Francesconi, 2000; Hobcraft & Kiernan, 2001; Perelli-Harris et al., 2010; Seltzer, 2004), Russia (Perelli-Harris & Gerber, 2011; Perelli-Harris et al., 2010), Austria, Italy, France, the Netherlands, West Germany, and Norway (Perelli-Harris et al., 2010) found that cohabitation and non-marital childbearing is associated with lower education and disadvantaged economic position.

Previous studies on Hungary mainly interpreted the spread of cohabitation and non-marital childbearing in the framework of the SDT (Bradatan & Kulcsár, 2008; Hoem et al., 2009; Pongrácz & Spéder, 2003; Spéder, 2004b). However, it might be that in Hungary, non-marital childbearing characterises disadvantaged social groups as was found for other countries. If this is the case, lower educated people would be more likely to experience a single or cohabiting conception than a marital conception compared to their higher educated counterparts.

2.2 CHANGES OVER TIME IN HUNGARY

In short, over time, not only political, societal, and economic but also demographic changes occurred in Hungary. Therefore, I expect that the influence of education on

the risk of a single, cohabiting, and marital conception also changed over time. Again, I provide arguments along the SDT and the Pattern of Disadvantage argument.

First, before the transition, the Hungarian society had traditional values, and the country was isolated from Western Europe. During the 1980s, consumerism became more important and people idealised western norms and lifestyles (Thornton & Philipov, 2007). This process was accelerated following the fall of the wall and Hungary became more similar to Western European countries (Spéder, 2003). Therefore, if the SDT holds, one would expect the positive effect of education on the risk of a single or cohabiting conception to be greater after the transition than during the earlier periods.

Next, before the transition, job security and full employment characterised the Hungarian labour market. As the aim of the communist ideology was to decrease social inequalities, differences between societal groups were reduced (Ferge, 2002). For example, in the early 1980s, the differences between the lowest and highest income groups were four-fold (Spéder, 2003). I argue that this might also imply smaller differences between higher and lower educated people's family formation behaviour. Thus, I expect to see small or no differences between educational groups with respect to the likelihood of a single or cohabiting conception in Hungary before the transition. After the transition, differences between the lowest and highest income groups increased to ten-fold (Spéder, 2003); job insecurity, poverty and unemployment levels also increased. As it became more difficult for young people to find a stable job, the educational system started to expand. This might imply that the role of education became more important in the family formation process after the transition. Thus, I would expect the negative effect of education on the risk of a single or cohabiting conception, as anticipated by the Pattern of Disadvantage argument, to be greater after the transition than before.

2.3 TRANSITION TO MARRIAGE IN HUNGARY

During state socialism, the majority of couples legitimised nomarital pregnancies by getting married (Pongrácz & Molnár, 2003). After the 1980s, as societal values changed and social norms weakened, cohabitation became a more accepted form of living arrangement and non-marital childbearing was more tolerated (Pongrácz & Molnár, 2003; Pongrácz & Spéder, 2003). In contemporary Hungary, however, marriage is still seen as the preferred living arrangement for couples with children

(Pongrácz & Spéder, 2003). Therefore, it is important to investigate whether people with different educational attainment would marry following a non-marital conception. Studies using data from 2001 showed that pregnancy accelerates the transition to marriage both if it happens within cohabitation or while being single (Bradatan & Kulcsár, 2008; Kulik, 2005). However, we do not know whether the risk of marriage differs between educational groups or by the type of non-marital conception (i.e. single or cohabiting).

3. DATA

I made use of the first wave of the Hungarian Generations and Gender Survey (GGS) from 2004 (N = 13,540). The dataset has extensive retrospective monthly information on life course events, such as children's date of birth and the beginning and end of up to six previous co-resident partnerships (both cohabitations and marriages). To ensure that the stratified, multistage sample is representative of the population aged 18-75 at the time of the interview, I applied weights. This study focuses on women because they are the actual child bearers. Also, previous research has shown that men's retrospective fertility histories are much less reliable than that of women's (Rendall, Clarke, Peters, Ranjit, & Verropoulou, 1999).

To answer the research questions, I conducted two sets of analyses. For the first set of analyses, I selected heterosexual women who were childless at age 15. These women were observed from age 15 until nine months before the interview to ensure that women who might have been pregnant at the time of the interview are excluded from the analysis. Individuals were censored when they experienced a first conception or, if this did not happen, at age 39; very few conceptions happened after this age. Additionally, women whose first child was not biological were deleted from the sample. The sample consisted of 7,317 observations (767,590 person-months). After taking into account only those who had valid answers on each variable included in the final models, I ended up with a sample size of 761,980 person months.

For the second set of analyses, I examined a subsample of women (N = 1,503) who experienced either a single or a cohabiting conception.

4. ANALYTICAL APPROACH

First, I employ discrete time competing risks analysis. Conducting multinomial logistic regression on a person-months dataset is analogous to discrete time competing risks analysis; it creates unbiased coefficients and produces consistent estimates of the standard errors (Allison, 1982). This approach estimates $m - 1$ models, where m is the number of categories of the outcome variable. In our case $m = 4$, where no conception, single conception, cohabiting conception, and martial conception are the possible outcomes.

I report and interpret the results based on relative risk ratios. Relative risk ratios, obtained by exponentiating regression coefficients, express how the risk of the outcome in the comparison group relative to the risk of the outcome in the reference group changes with the variable in question. A relative risk ratio greater than 1 indicates that as the value of the given independent variable increases, the risk of the outcome in the comparison group also increases relative to the risk of the outcome in the reference group. That is, the comparison group is more likely than the reference group. Consequently, a relative risk ratio smaller than 1 shows that as the variable in question increases the risk of the outcome in the comparison group decreases compared to that of the reference group.

Second, to examine whether and how education influences the probability of marrying between first conception and birth, I study a subsample of women (N = 1,503) who experienced either a single or a cohabiting conception. Using logistic regression, I estimate the risk of experiencing a marriage between a single or cohabiting conception and birth.

5. MEASURES

The variables used in the analyses are described in Table 1.

	Competing Risks Models	*Logistic Regression Models*
	% or mean of variables, N = 761,980	*% or mean of variables, N = 1,503*
Education		
Low	61.1%	52.4%
Medium	33.0%	42.0%
High	5.9%	5.6%
Age	20.7	20.7
Age^2	454.8	441.1
Period		
1941-1960	19.8%	15.5%
1961-1970	18.1%	12.4%
1971-1980	18.7%	22.6%
1981-1990	16.6%	20.7%
1991-2004	26.8%	28.8%
Type of conception[a]		
Single	31.8%	80.2%
Cohabiting	6.2%	19.8%
Marital	62.0%	NA

Table 1. Description and Distribution of the Variables Used in the Analyses
Note: [a] This variable has four categories: no conception, single conception, cohabiting conception and marital conception. 'No conceptions' are not taken into account when calculating these proportions.NA – not applicable

5.1 PARTNERSHIP CONTEXT OF FIRST CONCEPTION

The variables used in the first set of analysis are defined as follows;

Partnership context of first conception. The dependent variable, partnership context of first conception in a given month, was measured with a categorical variable with categories: no conception (0), single conception (1), cohabiting conception (2), and marital conception (3). The date of the conception was calculated by subtracting 9 months from the date of the birth of the first child. Although this computation assumes that all conceptions end with a live birth (and that all pregnancies last 9 months), studying conceptions instead of births gives us a more reliable picture of the actual partner status of the respondents. In this way I can avoid "shotgun marriages" and "shotgun cohabitations" that would bias the union status of the respondents at the

time of conception; it is common that couples immediately marry or start cohabiting once they realise that the woman is pregnant.

Education. The respondents' highest educational level was classified into six categories (ISCED0 – pre-primary education, ISCED1 – primary level, ISCED2 – lower secondary level, ISCED3 – upper secondary level, ISCED4 – post-secondary non-tertiary, ISCED5 – first stage of tertiary, ISCED6 – second stage of tertiary) using the International Standard Classification of Education (ISCED 1997). These categories were then recoded into three categories: low (ISCED0 – ISCED2), medium (ISCED3 and ISCED4), and high (ISCED5 and ISCED6) education. Following Perelli-Harris et al. (2010), I created a time-varying educational attainment variable. Using information on the year and month of reaching the highest educational level and on the number of years the completion of each educational level takes, I calculated the highest educational level in a given month. This method assumes continuous education from age 15 onwards. Information on the month of graduation was missing for 92% of the respondents. As most schools in Hungary end the school year in June and as this was the most frequent answer among the valid answers (71.23%), I imputed June for the missing values. In the analyses, a dummy variable was entered for each category of education with 'medium education' being the reference category.

Period. This variable indicates the years during which the respondent was at risk of conceiving. To control for the change in the risk of a first conception over time, I created a categorical variable with ten-year periods (1941-1960, 1961-1970, 1971-1980, 1981-1990, 1991-2004). Due to small numbers in the earliest period, the first category covers 20 years (1941-60) to ensure that the cell sizes are relatively comparable across the categories. Note that the years 1991-2004 refer to the period after the transition. Each category was entered as a dummy variable in the analyses, with the period '1941-1960' being the reference category.

Age. The respondents' age was measured in years and was calculated for each month. To see the possible non-linear effects of age, a polynomial specification of age (age squared) was also added to the models.

5.2 TRANSITION TO MARRIAGE

For the second set of analyses, the operationalization of the control variables (i.e. period and age) and education remains the same as for the first set of analyses. The only difference to be noted is that while both age and education are time-varying in the discrete time competing risks models, in the logistic regression models both age and education are time constant. Additionally, the following variables are defined.

Marriage. The binary dependent variable indicates whether or not the woman married between the non-marital conception and the birth of the child.

Partnership status at conception. This dummy variable indicates whether the conception happened within cohabitation (reference category) or while being single.

6. DESCRIPTIVE RESULTS

6.1 PARTNERSHIP CONTEXT OF FIRST CONCEPTION

Table 2 shows the distribution of single, cohabiting, and married first conceptions by level of education and time period. Among all educational categories, the proportion of single conceptions increased over time, although the trend is not so clear-cut for higher educated women. Furthermore, in all periods, the proportion of single conceptions is highest for women with the lowest educational attainment and lowest for those highly educated. For example, after the transition, the proportion of single conceptions was 35.4% for highly educated, 39.7% for medium educated, and 43.6% for low educated women. This suggests that higher educated women are the least likely to experience a single conception while lower educated women are the most likely to do so.

Similarly, the proportion of cohabiting conceptions increased in all educational groups over time; this increase was the greatest among low educated and it was the smallest among highly educated women. Thus, women with low education are the most likely to experience a cohabiting conception while highly educated women are the least likely. Additionally, the differences in the proportion of cohabiting conceptions have increased considerably between educational groups after 1981.

	Low			*Medium*			*High*			*Number of conceptions*		
	S	*C*	*M*	*S*	*C*	*M*	*S*	*C*	*M*	*S*	*C*	*M*
1941-1960	25.7	0.7	73.6	22.6	0.5	76.9	19.1	1.8	79.2	290	13	867
1961-1970	25.8	1.8	72.4	21.4	0.5	78.1	18.7	0	81.3	271	16	867
1971-1980	40.3	3.3	56.3	29.4	1.4	69.1	22.1	2.4	75.6	453	33	868
1981-1990	47.6	11.7	40.7	33.0	7.9	59.1	19.2	2.5	78.4	360	75	591
1991-2004	43.6	30.3	26.1	39.7	17.6	42.8	35.4	10.5	54.2	430	197	473
Total	33.2	5.3	61.5	31.3	7.2	61.6	25.2	4.9	69.9	1804	334	3666

Table 2. Number and Weighted Proportion of First Conceptions by Period, Educational Level, and Union Status at Conception (N = 761,980).
Note: S – single conception, C – cohabiting conception, M – marital conception

Not surprisingly, the proportion of marital conceptions decreased over time in all educational categories; this decrease was the most prominent among women in the lowest educational category (47.5 percentage point). In all time periods, highly educated women were more likely to experience a marital conception than medium educated women who, in turn, were also more likely to experience a marital conception than low educated women.

6.2 TRANSITION TO MARRIAGE

The proportion of women who marry following a single conception is around 70% among all educational categories (Table 3). Women who experienced a cohabiting conception are, on average, much less likely to marry before the birth of the child and there are greater educational differences among them. Just over 36% of women in the lowest educational category who conceived while being in cohabitation married before the birth of their child; this proportion is 33.2% among medium educated and 8.3% among high educated women. These figures suggest that more educated women are less likely to marry before the birth of the child following a non-marital conception. Additionally, women who were not in a co-residential union when the conception happened are far more likely in all educational groups to marry before the birth of the child than those who were cohabiting at the time of conception.

	Single Conception (n=890)		*Cohabiting Conception (n=103)*	
	Number	*Proportion*	*Number*	*Proportion*
Low education	480	71.5	48	36.4
Medium education	355	70.1	50	33.2
High education	50	69.3	2	8.3

Table 3. Number and Proportion of Women Marrying Following a Non-marital First Conception by Educational Level and type of Conception (N = 1,503).

7. MULTIVARIATE RESULTS

7.1 PARTNERSHIP CONTEXT OF FIRST CONCEPTIONS

Table 4 shows the stepwise discrete time competing risks models (Model 1 and Model 2). These models estimate the relative risk ratios of a single, cohabiting or marital first conception compared to no conception (baseline category) in a given month. Additional analysis is performed to examine the risk of a cohabiting and single conception as compared to a marital conception. The first model shows the effect of education on the risk of each type of conception controlling for period and age. Interaction effects between education and period are added in Model 2 to examine the changing influence of education on the risk of a first conception within different union types over time.

	Model 1			*Model 2*		
	S	*C*	*M*	*S*	*C*	*M*
Education						
Low	.88*	1.02	.84***	1.01	1.27	1.06
Medium (ref)						
High	.90	.60*	1.16*	1.17	4.82	1.22
Age	2.02***	1.84***	4.61***	2.02***	1.83***	4.56***
Age^2	.99***	.99***	.97***	.99***	.99***	.97***
Period						
1941-1960 (ref)						
1961-1970	1.01	2.10	.95	1.03	1.11	1.04
1971-1980	1.69***	4.55***	.89*	1.74**	3.86	1.10
1981-1990	1.54***	14.02***	.70***	1.77**	19.15**	.89
1991-2004	.93	18.15***	.24***	1.20	23.89**	.32***
Interactions						
1961-1970*low				1.01	2.45	.95
1961-1970*high				.84	.00***	.75
1971-1980*low				1.04	1.42	.79*
1971-1980*high				.65	.32	.73
1981-1990*low				.85	.71	.55***
1981-1990*high				.72	.09	1.21
1991-2004*low				.56**	.73	.45***
1991-2004*high				.81	.12	.93

Table 4. Results of the Competing Risks Models, Relative Risk Ratios, Base Outcome: No Conception (N = 761,980).

Note: S – single conception, C – cohabiting conception, M – marital conception

*p < .05, **p < .01, ***p < .001.

Model 1 shows how the risk of a single, cohabiting, and marital conception changes with education when controlling for period and age. Low educated women have a 12% lower risk of experiencing a single conception compared to medium educated women while there are no significant differences between medium and high educated women. Additionally, women with high education are 40% less likely to experience a conception within cohabitation than their medium educated counterparts; there are no significant differences between low and medium educated women. Finally, low educated women are 16% less likely than medium educated women to conceive within marriage. Similarly, medium educated women are 16% less likely than high educated women to experience a marital conception. These results suggest that education has a negative gradient for cohabiting conceptions and a positive gradient for marital and single conceptions.

From these results it is not clear whether there are significant differences in the effect of education on the risk of a single or cohabiting conception compared to a marital conception. For this aim, I change the baseline category in the discrete time

competing risks model to marital conception. The relative risk ratios of a single and a cohabiting conception compared to a marital conception are summarised in Figure 1. Higher educated women are less likely to experience both a single and a cohabiting conception compared to a marital conception than medium educated women. There are no significant differences between low and medium educated women. In other words, higher educated women are more likely to conceive within marriage than within cohabitation or while being single. All in all, these results indicate that education has a negative gradient of non-marital childbearing; highly educated women are less likely to experience a single as well as a cohabiting conception compared to a marital conception than their medium educated counterparts, holding other variables in the model constant.

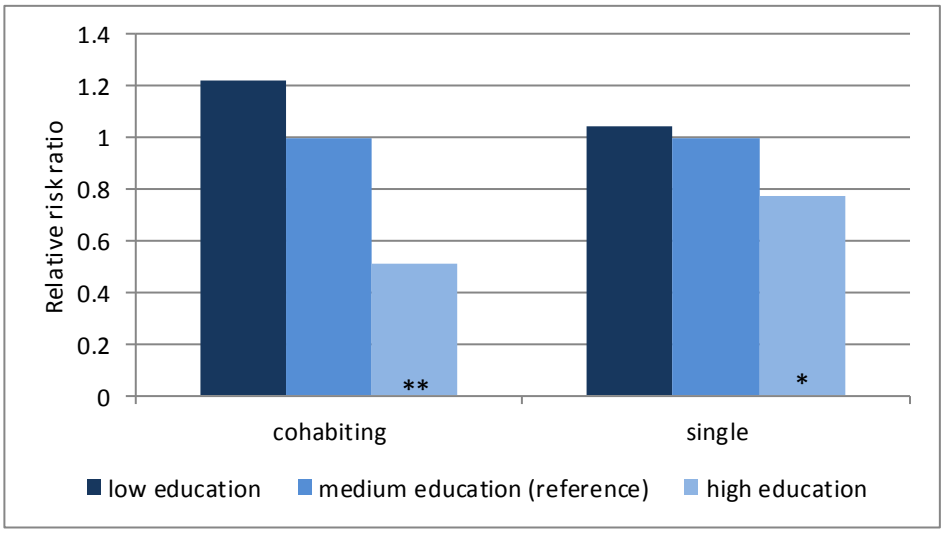

Figure 1. Relative risk ratios of a cohabiting and a single conception compared to a marital conception by education.
Note: *p < .05, **p < .01, ***p < .001.

To see whether and how the influence of education on the risk of a first conception within certain union types changed over time, I interpret the interaction terms between period and education. To facilitate the interpretation of the interactions, I calculate monthly predicted probabilities, estimated for a woman with average age with different educational levels for the different time periods. The predicted probabilities show that the probability of a single conception (Figure 2a) is slightly higher among medium educated women than among their higher and lower educated counterparts in all periods. Over time, the difference between medium and low

educated women increases. The significant interaction effect between period 1991-2004 and low education indicates that the positive gradient of education on the risk of a single conception has emerged after the transition, while before the transition educational differences in the risk of a single conception were not significant. Examining the significant main effects of period in Model 2 reveals that the probability of medium educated women to experience a single conception increased between 1971 and 1990. This also holds for women with medium levels of education (model not shown). Additionally, the probability of a cohabiting conception was very low between 1941 and 1970; after 1971, it started to increase gradually among all educational categories (Figure 2b). The interaction effects between period and education do not show a consistent pattern suggesting that the educational gradient of the probability of a cohabiting conception did not change much over time. Last, the educational gradient of a marital conception is positive in all time periods; more educated women are more likely to experience a marital conception than their less educated counterparts (Figure 2c). The significant interaction effects indicate that medium educated women were significantly more likely to experience a marital conception than their lower educated counterparts between 1971 and 2004. Until 1990, educational differences in the probability of a marital conception increased. However, after the transition, the differences seem to be smaller.

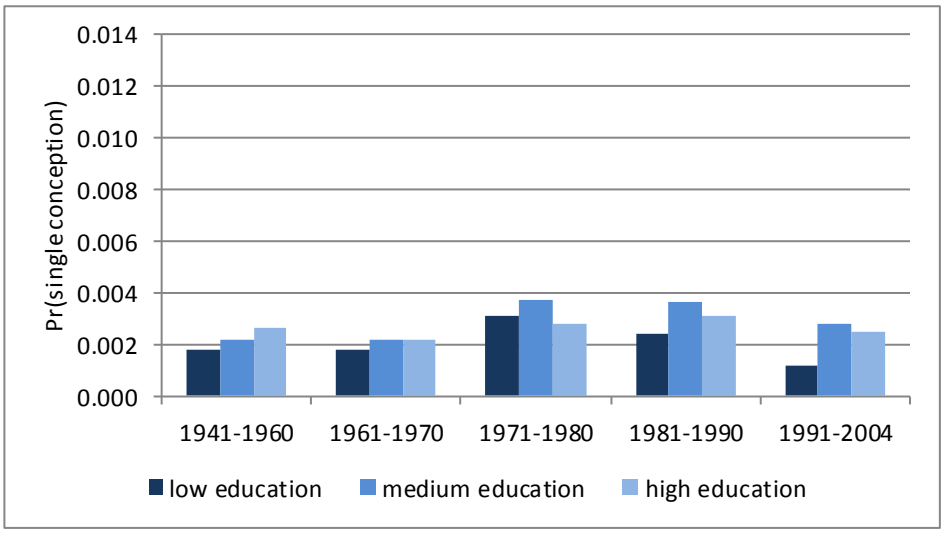

Figure 2a. Monthly predicted probabilities of a single conception by education and period.
Note: Predicted probabilities are calculated for a woman with average age.

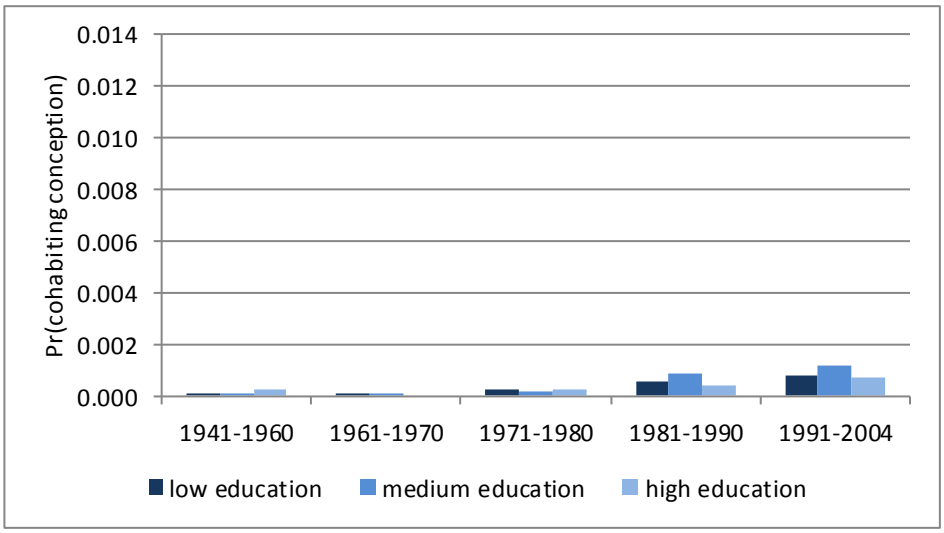

Figure 2b. Monthly predicted probabilities of a cohabiting conception by education and period.
Note: Predicted probabilities are calculated for a woman with average age.

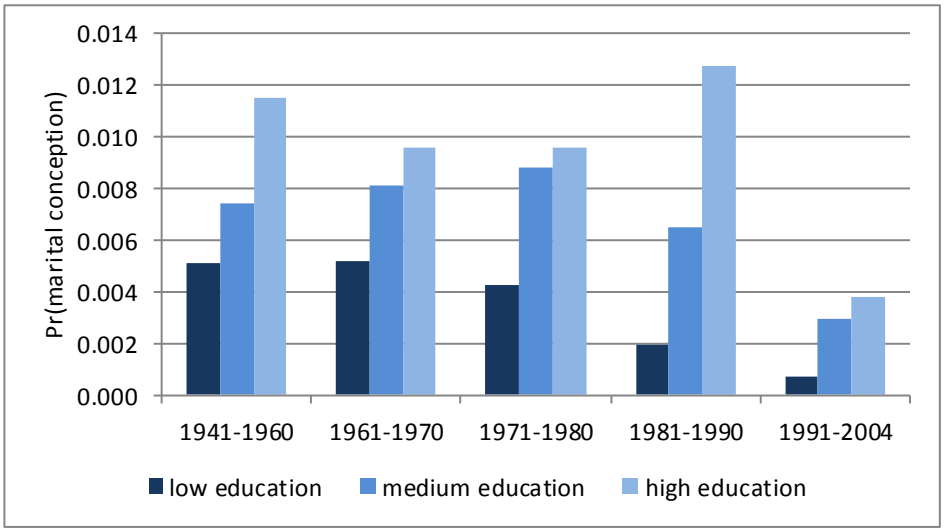

Figure 2c. Monthly predicted probabilities of a marital conception by education and period.
Note: Predicted probabilities are calculated for a woman with average age.

7.2 TRANSITION TO MARRIAGE

To examine whether and how education influences women's probability of marrying between a single or cohabiting conception and birth, I apply logistic regression models (Table 5). The results indicate that low educated women are almost 30% less likely to marry between conception and birth compared to their medium educated counterparts (Model 1). Interestingly, there are no significant differences in marriage risk between medium and high educated women. Furthermore, women who experience a conception while being single are more than 3.1 times as likely to marry

before the birth of the child as their counterparts who experienced a cohabiting conception. This effect, however, differs among women with different education, as indicated by the significant interaction effect between the type of non-marital conception and education (Model 2). Calculating the net interaction effect reveals that high educated women who experience a single conception are almost 1.4 times as likely to marry before the birth of the first child as their medium educated counterparts. Finally, there is little change in the risk of marriage after a non-marital conception over time before 1991. In 1991-2004 the risk of this transition was almost 70% smaller than in 1941-1960. This might indicate that shotgun marriages played an important role throughout the years before 1991.

	Model 1	Model2
Education		
Low education	.72*	.79
Medium education (ref)		
High education	1.05	.26
Type of conception		
Cohabiting conception (ref)		
Single conception	3.14***	3.07***
Age	1.38*	1.37*
Age^2	.99**	.99**
Period		
1941-1960 (ref)		
1961-1970	.81	.80
1971-1980	.75	.74
1981-1990	.65	.64*
1991-2004	.26***	.25***
Interactions		
Single*low		.89
Single*high		5.38*
Constant	.07	.08

Table 5. Results of the Logistic Regression Models, Dependent Variable: Marriage, Odds Ratios (N = 1,503).
Note: *p < .05, **p < .01, ***p < .001.

8. CONCLUSION AND DISCUSSION

There has been much debate in the literature about the role of education in non-marital childbearing. On the one hand, according to the Second Demographic Transition theory, higher educated women adjust their family behaviours in order to be able to fulfil their "higher order" needs. This means that these women are less likely to marry and, thus, are more likely to conceive within a non-marital union than their lower educated counterparts. On the contrary, some studies argue that the disadvantaged, lower educated women are more likely to have a child within these new types of family forms.

This article tested these contradictory expectations for the Hungarian setting by examining how the risk of a single, cohabiting, and marital conception is influenced by educational attainment. I found that higher educated women are less likely to experience a cohabiting conception compared to their medium educated counterparts. Interestingly, the risk of a cohabiting conception did not differ between low and medium educated women. This suggests that in Hungary, the divide is between medium and high educated women rather than between those with the lowest education and their more educated counterparts, which partly supports the Pattern of Disadvantage argument. Although, based on the Pattern of Disadvantage theory, one would expect women from the lowest educational groups to have the highest risk of a cohabiting conception, which is not the case here. This finding is partially in line with previous studies which found that education has a negative gradient of non-marital childbearing in Austria, France, West-Germany, Italy, the Netherlands, Norway, Russia and the UK (Perelli-Harris et al., 2010). Furthermore, in general, my findings corroborate Spéder (2004b) although he found significant differences between low and medium educated women when comparing their risks of a cohabiting conception and non-marital conception to a marital conception.

Additionally, in line with the expectations of SDT, I found that education has a positive gradient on the risk of a single conception; women with medium education are more likely to conceive while being single than their low educated counterparts. There were no significant differences between medium and high educated women; this suggests that the divide is between low and medium educated women when it comes to experiencing a single conception. A possible explanation for this finding might be that most medium and high educated single women had a non-resident

partner at the time of conception but, for example, due to economic obstacles (e.g. common housing) they could not afford moving together. The dataset did not allow for differentiating between co-resident and non-resident relationships. This result contradicts previous studies on the US and Western European countries which found that low educated women have a higher risk to conceive while being single (McLanahan, 2004; Perelli-Harris et al., 2010). Previous research did not examine the effect of education on a single conception in Hungary.

In addition, I found that in Hungary, more educated women are more likely to experience a marital conception than their lower educated counterparts. Similarly, when comparing the risk of a single and cohabiting conception to a marital conception, highly educated women are less likely to experience both a single and a cohabiting conception compared to a marital conception than their medium educated counterparts. This indicates that the educational gradient of non-marital childbearing compared to childbearing within marriage is negative. This finding is in line with the Pattern of Disadvantage argument and corroborates previous studies on Western European countries (Perelli-Harris et al., 2010) and in the region such as Romania (Hărăguş & Oaneş, 2009), Bulgaria (von der Lippe, 2009), Ukraine (Perelli-Harris, 2008) and the Czech Republic (Zeman, 2009).

Furthermore, I investigated whether and how the influence of education on the risk of a single, cohabiting, and marital conception has changed over time. The results indicated that the positive gradient of education on the risk of a single conception emerged after the transition; before 1990, differences between medium and low educated women were not significant. This finding is in line with the expectations of the SDT. Additionally, there were no consistent changes in the risk of a cohabiting conception by educational attainment over time. Finally, between 1971 and 2004, the positive gradient of education on the risk of a marital conception became weaker. This finding does not corroborate either the SDT or the Pattern of Disadvantage argument. All in all, I conclude that there were some changes in the educational gradient of a single and marital conception over time while this was not the case for cohabiting conceptions. It might be that I did not have enough statistical power to detect significant changes over time because this behaviour has only just started to emerge in Hungary. Moreover, the results also highlight that changes in family behaviours had already started before the transition. After 1971, the risk of a single and cohabiting conception increased both for low and medium educated

women while, at the same time, the risk of a marital conception declined. During these periods, Hungary was less isolated from Western Europe and the values and norms of people became more "Westernised". This result is in line with previous studies which examined union and family formation in Hungary and found that these behaviours had already started to change before the transition (Carlson & Klinger, 1987; Frejka, 2008; Spéder, 2005).

Last, I studied the influence of education on the probability of marrying between conception and birth among women who experienced a non-marital conception. I found that women with medium education are more likely to marry between conception and birth than their lower educated counterparts and there were no differences between medium and high educated women. Thus, it seems that in Hungary, women with medium and high levels of education find it most important to legitimise a non-marital conception via marriage. This finding does not corroborate either the SDT or the Pattern of Disadvantage argument. Additionally, the influence of education on marriage risks varies according to the type of conception; high educated women were 1.4 times as likely as their medium educated counterparts to marry following a single conception. These results are similar to earlier studies conducted in different contexts. For example, in Russia women with low education were found to be the least likely to marry following a single or cohabiting conception (Perelli-Harris & Gerber, 2011). Furthermore, I found that women who experienced a single conception are more likely to marry than those who experienced a conception within a co-residential union. It might be that women who conceive in cohabitation do not marry because this setting is increasingly seen to be suitable for childbearing. Another, probably more likely explanation is data related. Many of those women who do not live in a co-residential union might actually have a non-residential partner. In Hungary, due to constraints of the housing market, young couples often have limited opportunities to move in together. Although the GGS has asked respondents if they had a non-residential partner, unfortunately this question was only asked for the time of the interview and no retrospective information was collected. Thus, it may be that most single conceptions actually happened within a non-residential union.

Finally, some limitations of this study have to be mentioned. First, retrospective data might suffer from possible recall errors and misreporting. It can be expected that it is especially true in case of remembering the starting and ending date of several cohabiting relationships and less so in case of marriages or childbirths.

Conceptions to single women would, in this way, be overestimated relative to conceptions to cohabiting women. Second, some of the findings might be driven by the low prevalence of cohabiting conceptions during earlier time periods. It might be that I did not have enough statistical power to detect significant changes over time because conceptions within cohabitation only started to become more common in the latest periods. Third, the SDT is not only about the role of education but also about the role of values in the union and family formation process. As the dataset does not contain time-varying information on the values and beliefs of the respondents, this dimension was not included in the paper. Future research could further investigate this question when later waves of the survey become available. Last, the risk of non-marital childbearing might not only be influenced by education but also by other factors such as the type of settlement or religiosity. However, while the GGS holds detailed information on union and fertility histories, it does not include time-varying information on these determinants. Future research might be interested in studying the influence of other time-varying factors on the risk of a non-marital conception once later waves become available.

Nonetheless, this study is the first to investigate the changing impact of education on the risk of a first conception and birth in Hungary within different union types, differentiating between single and cohabiting non-marital conceptions and applying competing risks models. I showed that in Hungary, high educated women are less likely to experience a cohabiting or single conception compared to a marital conception than their low educated counterparts. Moreover, once a non-marital conception occurs, medium educated women are more likely to marry before the birth of the child then low educated women. These findings indicate that in Hungary, family formation behaviours vary by socioeconomic status and that, indeed, these behaviours might play a role in the reproduction of inequalities.

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ESRC Centre for Population Change Working Paper
Number 30

CPC
centre for population change

With or Without You
Partnership context of first conceptions and births in Hungary

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February 2013

ISSN2042-4116

E·S·R·C
ECONOMIC & SOCIAL RESEARCH COUNCIL

ABSTRACT

Using notions from the Second Demographic Transition theory and the Pattern of Disadvantage argument, I study how women's risk of a first conception within different union types (single, cohabitation, marriage) is influenced by education in Hungary and whether this influence has changed over time. Additionally, I examine the transition to marriage among women who experienced a non-marital conception. Using the first wave of the Hungarian Generations and Gender Survey from 2004, I conduct discrete time survival analyses and logistic regression. I find a positive educational gradient for single and marital conceptions while this gradient is negative for cohabiting conceptions. Highly educated women are less likely to experience a conception when single or cohabiting than when married compared to their medium educated counterparts. Furthermore, the impact of education on the risk of a single and marital conception has changed over time. Following the transition in 1990, a positive gradient of education on the risk of a single conception emerged whereas for marital conceptions the effect of education is negative. No consistent patterns are found for cohabiting conceptions. Additionally, medium educated women and those who experienced a conception while being single are more likely to marry between the conception and birth than their lower educated counterparts and those who experienced a cohabiting conception. Furthermore, highly educated women who experience a single conception are 1.4 times as likely to marry before the birth of the first child as their counterparts with medium education.

KEYWORDS

First conception; first birth; partnership context; competing risks; Hungary

EDITORIAL NOTE

Julia Mikolai is a PhD candidate at the University of Southampton supervised by Dr Brienna Perelli-Harris and Dr Ann Berrington. With a background in Sociology and Demography, Julia's research interests include the intersection between partnership status and parenthood in contemporary Europe, life course research, and multistate models.

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ACKNOWLEDGEMENT

An earlier version of this paper was prepared as the product of the European Doctoral School of Demography (EDSD), hosted by the Centre for Economic Demography at Lund University. The author is grateful for the financial support received from the Netherlands Interdisciplinary Demographic Institute (NIDI) while participating in EDSD. An early draft of this paper was presented as a poster presentation at the 77th Annual Meeting of the Population Association of America, 3-5 May, San Francisco, CA. The current version of the paper was prepared while the author was a PhD student at the University of Southampton, funded by the Economic and Social Research Council (ESRC). The author is grateful for financial support received from the ESRC Centre for Population Change (CPC) at the University of Southampton. Thanks to Brienna Perelli-Harris, Ann Berrington, Martin Dribe, and Mark Lyons-Amos for their comments and suggestions. The GGS data were obtained from the GGP Data Archive and refer to the publication that contains the model survey instruments: United Nations 2005. Generations & Gender Programme: Survey Instruments. New York and Geneva: UN, 2005.

The ESRC Centre for Population Change Working Paper Series is edited by Teresa McGowan

WITH OR WITHOUT YOU: PARTNERSHIP CONTEXT OF FIRST CONCEPTIONS AND BIRTHS IN HUNGARY

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1. INTRODUCTION

In the last few decades, the prevalence of alternative family forms, such as non-marital cohabitation and non-marital childbearing increased across Europe and in the United States. The increase in the proportion of births out of wedlock was mainly the result of the rising number of cohabitations and cohabiting births in most European countries (Perelli-Harris & Gerber, 2011; Perelli-Harris et al., 2010; Spéder, 2004b), except in the UK where the number of births to single mothers also increased (Kiernan, 2004).

There has been much debate about how the increasing share of non-marital births can be explained and which societal groups are experiencing these new forms of family behaviours. On the one hand, the Second Demographic Transition (SDT) theory argues that ideational and value changes contribute to changing family behaviours. Thus, liberal, individualistic and more secularised people are expected to be the forerunners of these family formation behaviours (Lesthaeghe & van de Kaa, 1986). On the other hand, using the Pattern of Disadvantage argument, some studies show that groups on the lower end of the society (i.e. those with low education and fewer resources) are more likely to give birth within cohabitation (Berrington, 2001; Perelli-Harris & Gerber, 2011; Perelli-Harris et al., 2010). If this is the case, the increasing proportion of non-marital births might contribute to the reproduction of inequalities.

This study focuses on Hungary, where a societal, political, and economic transition took place in 1990; democracy replaced socialism, market economy was implemented and norms and values of people changed. These changes affected fertility and family formation behaviours (Thornton & Philipov, 2009). For example, first births and marriages were increasingly delayed or forgone and the prevalence of cohabitation and non-marital childbearing increased (Hoem, Kostova, Jasilioniene, & Muresan, 2009). The rate of extramarital pregnancies remained very low at the 5-7% level until the 1980s when it started to increase (Pongrácz & Molnár, 2003) along with the proportion of cohabitants. Before the 1980s, most cohabitation in Hungary was post-marital, but after the mid-1980s, never-married cohabitation as well as non-marital childbearing became more common (Carlson & Klinger, 1987; Spéder, 2005). Between 1998 and 2011, the proportion of out-of-wedlock births rose dramatically from 26.6% to 42.3% in 2011. This rate is the highest among post-socialist countries

in the region (Eurostat, 2012). Yet, attention has mainly been focussed on describing rather than explaining trends in the partnership context of first births in Hungary. As a result of this, it is not clear whether non-marital conceptions are more likely to occur among people with high or low socioeconomic status in the Hungarian context. Using educational attainment as a proxy for socioeconomic status, it is possible to examine which societal groups are more likely to experience these new family forms.

Therefore, this study aims to answer the following research questions: How does education influence women's risk of a first conception within different union types (i.e. single, cohabitation, marriage) in Hungary? Has this influence changed over time? To capture possible changes in partnership status between conception and birth, I focus on first conceptions. Higher order conceptions are less likely to happen in a non-marital union as women frequently marry their partner after the first conception. This implies that partnership status at conception might not be of importance *per se* if the spouses get married between conception and birth. Therefore, this paper also investigates whether women who experienced a non-marital conception marry between conception and birth.

This study contributes to the literature in several ways. First, most previous studies on Hungary investigated which educational groups cohabiters belong to (Pongrácz & Spéder, 2003; Spéder, 2005) or how education is related to the timing of first union formation and first birth (Aassve, Billari, & Spéder, 2006; Bradatan & Kulcsár, 2008; Hoem, Gabrielli, Jasilioniene, Kostova, & Matysiak, 2010; Hoem et al., 2009). Much less attention has been paid to the relationship between education and partnership status at first conception or birth. An exception is Spéder (2004b), who found that the least educated women are the most likely to have a child in a non-marital union and within cohabitation using logistic regression models. However, he did not distinguish between first and higher order births and did not compare the risk of a single, cohabiting and marital birth by education within the same model. The present study aims to contribute to the literature by applying discrete time competing risks models.

Second, previous research did not investigate whether and how the influence of education on the risk of a single, cohabiting, and marital conception has changed over time. For example, Spéder (2004b) restricted the multivariate analyses to births that occurred after the transition in 1990. However, given the vast societal, economic and political changes after the transition, one would expect that the extent to which

education influences the partnership status of first conceptions has also changed over time. Furthermore, as previous studies indicated, some changes in partnership and family formation behaviours had already started before the transition (Carlson & Klinger, 1987; Spéder, 2005). Therefore, by examining how the effect of education on the risk of a first conception within different union types has changed over time, the present study fills a gap in the literature on Hungary.

Third, in order to be able to assess changes in partnership status between conception and birth by education, I investigate time to first conception (rather than to first birth as was done by Spéder (2004b)). This is essential as the partnership status of spouses often changes between conception and birth. If this is the case, partnership status at conception may be less important than at birth. Furthermore, there might be educational differences in the decision to marry following a non-marital conception.

To sum up, the present study contributes to the literature by applying discrete time competing risks analyses to examine the risk of a first conception within different union types in Hungary, differentiating between cohabiting and single non-marital conceptions. Furthermore, I examine possible changes over time in the influence of education on the risk of a first conception within different union types. Last, studying first conceptions as opposed to first births allows for examining changes in partnership status between conception and birth by education.

2. THEORY AND HYPOTHESES

2.1 SECOND DEMOGRAPHIC TRANSITION VERSUS PATTERN OF DISADVANTAGE

From the 1960s, major demographic changes took place in Western Europe: the quantum of fertility was declining, marriage and childbearing were being postponed, new living arrangements were adopted, the proportion of married people was decreasing while the proportion of cohabiting couples was increasing, as did the proportion of births out of wedlock (Frejka, 2008; Lesthaeghe & Moors, 2000; Lesthaeghe & Neidert, 2006; Van de Kaa, 2002). Theorists of the Second Demographic Transition (SDT) argue that these changes were not only demographic in their nature but they were also linked to changes in peoples' values (Lesthaeghe & van de Kaa, 1986). As a result of increasing living standards, weakened normative regulations, increasing gender equality and female autonomy, people discovered their

need for self-development and self-fulfilment. The new lifestyle choices, related to the rise of "higher order needs" (Maslow, 1954) and self-realisation led to changes in family formation behaviours (Surkyn & Lesthaeghe, 2004).

Although the SDT does not offer an explicit explanation for how ideational changes are related to the increasing proportion of non-marital births, from its arguments it follows that more egalitarian people with more secular values would engage in new living arrangements to fulfil their needs of self-development and individualism (Lesthaeghe & Neidert, 2006; Surkyn & Lesthaeghe, 2004). In other words, more liberal people are more likely to choose to cohabit with a partner without being married, live alone, or have a baby within a non-marital union. Previous research interpreted the diffusion of new family behaviours, including non-marital childbearing and cohabitation, as support for the SDT in the United States (Lesthaeghe & Neidert, 2006; Raley, 2001) and in Western Europe (Lesthaeghe, 2010; Lesthaeghe & Moors, 2000; Surkyn & Lesthaeghe, 2004; Van de Kaa, 2002).

The SDT was originally formulated to understand changing family behaviours in the United States and in Western Europe, as countries belonging to the Soviet bloc had completely different experiences. For example, when the baby boom was occurring in Western Europe, Central and Eastern European countries were experiencing fertility decline. In the 1970s and 1980s, due to pro-natalist policies, the centrally planned economy, and full employment (of both men and women), fertility rates stabilised around replacement level in Hungary. Furthermore, early and universal marriage, low age at childbearing, high rates of first and second births as well as low rates of childlessness characterised the country (Frejka, 2008; Hoem et al., 2009). In Hungary, changes in values were reinforced by the socialist regime; the society became atomised and demobilised, and people drew back to the privacy of family life (Beluszky, 2000). After the mid-1960s, the system has softened and the importance of consumption increased although there were limited consumption possibilities (Sobotka, 2008). Moreover, there was a general acceptance and imitation of "Western norms" and lifestyles which were associated with modern life and economic prosperity (Sobotka, 2008; Thornton & Philipov, 2009). After the fall of the Soviet Union and with the implementation of the market economy, uncertainty, anomie, job insecurity, and unemployment characterised Hungarian society (Spéder, 2004a, 2006). At the same time, demand for highly educated people, and professional and leisure time opportunities emerged. The society was left with weakened norms

and institutions; therefore people were ready to adjust their behaviours to the new circumstances (Beluszky, 2000; Frejka, 2008).

Thus, after the transition, the Hungarian society became more similar to Western European countries (Spéder, 2003). The increased consumption possibilities allowed higher educated people to develop higher order needs and in order to be able to fulfil them they might have chosen alternative ways of family formation. Thus, the SDT anticipates that higher educated people are more likely to experience a single or cohabiting conception than a marital conception compared to their lower educated counterparts. Consequently, lower educated people would be more likely to conceive within marriage than in cohabitation or while being single compared to higher educated people.

On the contrary, it might be that cohabitation and non-marital childbearing reflect structural differences and circumstances rather than ideational choices. In other words, those with lower socioeconomic status tend to establish families in these alternative settings (Berrington, 2001; Perelli-Harris & Gerber, 2011; Perelli-Harris et al., 2010). Indeed, studies in the United States (Bumpass & Lu, 2000; Seltzer, 2004; Thornton, Axinn, & Teachman, 1995), UK (Berrington, 2001; Ermisch & Francesconi, 2000; Hobcraft & Kiernan, 2001; Perelli-Harris et al., 2010; Seltzer, 2004), Russia (Perelli-Harris & Gerber, 2011; Perelli-Harris et al., 2010), Austria, Italy, France, the Netherlands, West Germany, and Norway (Perelli-Harris et al., 2010) found that cohabitation and non-marital childbearing is associated with lower education and disadvantaged economic position.

Previous studies on Hungary mainly interpreted the spread of cohabitation and non-marital childbearing in the framework of the SDT (Bradatan & Kulcsár, 2008; Hoem et al., 2009; Pongrácz & Spéder, 2003; Spéder, 2004b). However, it might be that in Hungary, non-marital childbearing characterises disadvantaged social groups as was found for other countries. If this is the case, lower educated people would be more likely to experience a single or cohabiting conception than a marital conception compared to their higher educated counterparts.

2.2 CHANGES OVER TIME IN HUNGARY

In short, over time, not only political, societal, and economic but also demographic changes occurred in Hungary. Therefore, I expect that the influence of education on

the risk of a single, cohabiting, and marital conception also changed over time. Again, I provide arguments along the SDT and the Pattern of Disadvantage argument.

First, before the transition, the Hungarian society had traditional values, and the country was isolated from Western Europe. During the 1980s, consumerism became more important and people idealised western norms and lifestyles (Thornton & Philipov, 2007). This process was accelerated following the fall of the wall and Hungary became more similar to Western European countries (Spéder, 2003). Therefore, if the SDT holds, one would expect the positive effect of education on the risk of a single or cohabiting conception to be greater after the transition than during the earlier periods.

Next, before the transition, job security and full employment characterised the Hungarian labour market. As the aim of the communist ideology was to decrease social inequalities, differences between societal groups were reduced (Ferge, 2002). For example, in the early 1980s, the differences between the lowest and highest income groups were four-fold (Spéder, 2003). I argue that this might also imply smaller differences between higher and lower educated people's family formation behaviour. Thus, I expect to see small or no differences between educational groups with respect to the likelihood of a single or cohabiting conception in Hungary before the transition. After the transition, differences between the lowest and highest income groups increased to ten-fold (Spéder, 2003); job insecurity, poverty and unemployment levels also increased. As it became more difficult for young people to find a stable job, the educational system started to expand. This might imply that the role of education became more important in the family formation process after the transition. Thus, I would expect the negative effect of education on the risk of a single or cohabiting conception, as anticipated by the Pattern of Disadvantage argument, to be greater after the transition than before.

2.3 TRANSITION TO MARRIAGE IN HUNGARY

During state socialism, the majority of couples legitimised nomarital pregnancies by getting married (Pongrácz & Molnár, 2003). After the 1980s, as societal values changed and social norms weakened, cohabitation became a more accepted form of living arrangement and non-marital childbearing was more tolerated (Pongrácz & Molnár, 2003; Pongrácz & Spéder, 2003). In contemporary Hungary, however, marriage is still seen as the preferred living arrangement for couples with children

(Pongrácz & Spéder, 2003). Therefore, it is important to investigate whether people with different educational attainment would marry following a non-marital conception. Studies using data from 2001 showed that pregnancy accelerates the transition to marriage both if it happens within cohabitation or while being single (Bradatan & Kulcsár, 2008; Kulik, 2005). However, we do not know whether the risk of marriage differs between educational groups or by the type of non-marital conception (i.e. single or cohabiting).

3. DATA

I made use of the first wave of the Hungarian Generations and Gender Survey (GGS) from 2004 (N = 13,540). The dataset has extensive retrospective monthly information on life course events, such as children's date of birth and the beginning and end of up to six previous co-resident partnerships (both cohabitations and marriages). To ensure that the stratified, multistage sample is representative of the population aged 18-75 at the time of the interview, I applied weights. This study focuses on women because they are the actual child bearers. Also, previous research has shown that men's retrospective fertility histories are much less reliable than that of women's (Rendall, Clarke, Peters, Ranjit, & Verropoulou, 1999).

To answer the research questions, I conducted two sets of analyses. For the first set of analyses, I selected heterosexual women who were childless at age 15. These women were observed from age 15 until nine months before the interview to ensure that women who might have been pregnant at the time of the interview are excluded from the analysis. Individuals were censored when they experienced a first conception or, if this did not happen, at age 39; very few conceptions happened after this age. Additionally, women whose first child was not biological were deleted from the sample. The sample consisted of 7,317 observations (767,590 person-months). After taking into account only those who had valid answers on each variable included in the final models, I ended up with a sample size of 761,980 person months.

For the second set of analyses, I examined a subsample of women (N = 1,503) who experienced either a single or a cohabiting conception.

4. ANALYTICAL APPROACH

First, I employ discrete time competing risks analysis. Conducting multinomial logistic regression on a person-months dataset is analogous to discrete time competing risks analysis; it creates unbiased coefficients and produces consistent estimates of the standard errors (Allison, 1982). This approach estimates $m - 1$ models, where m is the number of categories of the outcome variable. In our case $m = 4$, where no conception, single conception, cohabiting conception, and martial conception are the possible outcomes.

I report and interpret the results based on relative risk ratios. Relative risk ratios, obtained by exponentiating regression coefficients, express how the risk of the outcome in the comparison group relative to the risk of the outcome in the reference group changes with the variable in question. A relative risk ratio greater than 1 indicates that as the value of the given independent variable increases, the risk of the outcome in the comparison group also increases relative to the risk of the outcome in the reference group. That is, the comparison group is more likely than the reference group. Consequently, a relative risk ratio smaller than 1 shows that as the variable in question increases the risk of the outcome in the comparison group decreases compared to that of the reference group.

Second, to examine whether and how education influences the probability of marrying between first conception and birth, I study a subsample of women (N = 1,503) who experienced either a single or a cohabiting conception. Using logistic regression, I estimate the risk of experiencing a marriage between a single or cohabiting conception and birth.

5. MEASURES

The variables used in the analyses are described in Table 1.

	Competing Risks Models	*Logistic Regression Models*
	% or mean of variables, N = 761,980	*% or mean of variables, N = 1,503*
Education		
Low	61.1%	52.4%
Medium	33.0%	42.0%
High	5.9%	5.6%
Age	20.7	20.7
Age^2	454.8	441.1
Period		
1941-1960	19.8%	15.5%
1961-1970	18.1%	12.4%
1971-1980	18.7%	22.6%
1981-1990	16.6%	20.7%
1991-2004	26.8%	28.8%
Type of conception[a]		
Single	31.8%	80.2%
Cohabiting	6.2%	19.8%
Marital	62.0%	NA

Table 1. Description and Distribution of the Variables Used in the Analyses
Note: [a] This variable has four categories: no conception, single conception, cohabiting conception and marital conception. 'No conceptions' are not taken into account when calculating these proportions.NA – not applicable

5.1 PARTNERSHIP CONTEXT OF FIRST CONCEPTION

The variables used in the first set of analysis are defined as follows;

Partnership context of first conception. The dependent variable, partnership context of first conception in a given month, was measured with a categorical variable with categories: no conception (0), single conception (1), cohabiting conception (2), and marital conception (3). The date of the conception was calculated by subtracting 9 months from the date of the birth of the first child. Although this computation assumes that all conceptions end with a live birth (and that all pregnancies last 9 months), studying conceptions instead of births gives us a more reliable picture of the actual partner status of the respondents. In this way I can avoid "shotgun marriages" and "shotgun cohabitations" that would bias the union status of the respondents at the

time of conception; it is common that couples immediately marry or start cohabiting once they realise that the woman is pregnant.

Education. The respondents' highest educational level was classified into six categories (ISCED0 – pre-primary education, ISCED1 – primary level, ISCED2 – lower secondary level, ISCED3 – upper secondary level, ISCED4 – post-secondary non-tertiary, ISCED5 – first stage of tertiary, ISCED6 – second stage of tertiary) using the International Standard Classification of Education (ISCED 1997). These categories were then recoded into three categories: low (ISCED0 – ISCED2), medium (ISCED3 and ISCED4), and high (ISCED5 and ISCED6) education. Following Perelli-Harris et al. (2010), I created a time-varying educational attainment variable. Using information on the year and month of reaching the highest educational level and on the number of years the completion of each educational level takes, I calculated the highest educational level in a given month. This method assumes continuous education from age 15 onwards. Information on the month of graduation was missing for 92% of the respondents. As most schools in Hungary end the school year in June and as this was the most frequent answer among the valid answers (71.23%), I imputed June for the missing values. In the analyses, a dummy variable was entered for each category of education with 'medium education' being the reference category.

Period. This variable indicates the years during which the respondent was at risk of conceiving. To control for the change in the risk of a first conception over time, I created a categorical variable with ten-year periods (1941-1960, 1961-1970, 1971-1980, 1981-1990, 1991-2004). Due to small numbers in the earliest period, the first category covers 20 years (1941-60) to ensure that the cell sizes are relatively comparable across the categories. Note that the years 1991-2004 refer to the period after the transition. Each category was entered as a dummy variable in the analyses, with the period '1941-1960' being the reference category.

Age. The respondents' age was measured in years and was calculated for each month. To see the possible non-linear effects of age, a polynomial specification of age (age squared) was also added to the models.

5.2 TRANSITION TO MARRIAGE

For the second set of analyses, the operationalization of the control variables (i.e. period and age) and education remains the same as for the first set of analyses. The only difference to be noted is that while both age and education are time-varying in the discrete time competing risks models, in the logistic regression models both age and education are time constant. Additionally, the following variables are defined.

Marriage. The binary dependent variable indicates whether or not the woman married between the non-marital conception and the birth of the child.

Partnership status at conception. This dummy variable indicates whether the conception happened within cohabitation (reference category) or while being single.

6. DESCRIPTIVE RESULTS

6.1 PARTNERSHIP CONTEXT OF FIRST CONCEPTION

Table 2 shows the distribution of single, cohabiting, and married first conceptions by level of education and time period. Among all educational categories, the proportion of single conceptions increased over time, although the trend is not so clear-cut for higher educated women. Furthermore, in all periods, the proportion of single conceptions is highest for women with the lowest educational attainment and lowest for those highly educated. For example, after the transition, the proportion of single conceptions was 35.4% for highly educated, 39.7% for medium educated, and 43.6% for low educated women. This suggests that higher educated women are the least likely to experience a single conception while lower educated women are the most likely to do so.

Similarly, the proportion of cohabiting conceptions increased in all educational groups over time; this increase was the greatest among low educated and it was the smallest among highly educated women. Thus, women with low education are the most likely to experience a cohabiting conception while highly educated women are the least likely. Additionally, the differences in the proportion of cohabiting conceptions have increased considerably between educational groups after 1981.

	Low			*Medium*			*High*			*Number of conceptions*		
	S	*C*	*M*	*S*	*C*	*M*	*S*	*C*	*M*	*S*	*C*	*M*
1941-1960	25.7	0.7	73.6	22.6	0.5	76.9	19.1	1.8	79.2	290	13	867
1961-1970	25.8	1.8	72.4	21.4	0.5	78.1	18.7	0	81.3	271	16	867
1971-1980	40.3	3.3	56.3	29.4	1.4	69.1	22.1	2.4	75.6	453	33	868
1981-1990	47.6	11.7	40.7	33.0	7.9	59.1	19.2	2.5	78.4	360	75	591
1991-2004	43.6	30.3	26.1	39.7	17.6	42.8	35.4	10.5	54.2	430	197	473
Total	33.2	5.3	61.5	31.3	7.2	61.6	25.2	4.9	69.9	1804	334	3666

Table 2. Number and Weighted Proportion of First Conceptions by Period, Educational Level, and Union Status at Conception (N = 761,980).
Note: S – single conception, C – cohabiting conception, M – marital conception

Not surprisingly, the proportion of marital conceptions decreased over time in all educational categories; this decrease was the most prominent among women in the lowest educational category (47.5 percentage point). In all time periods, highly educated women were more likely to experience a marital conception than medium educated women who, in turn, were also more likely to experience a marital conception than low educated women.

6.2 TRANSITION TO MARRIAGE

The proportion of women who marry following a single conception is around 70% among all educational categories (Table 3). Women who experienced a cohabiting conception are, on average, much less likely to marry before the birth of the child and there are greater educational differences among them. Just over 36% of women in the lowest educational category who conceived while being in cohabitation married before the birth of their child; this proportion is 33.2% among medium educated and 8.3% among high educated women. These figures suggest that more educated women are less likely to marry before the birth of the child following a non-marital conception. Additionally, women who were not in a co-residential union when the conception happened are far more likely in all educational groups to marry before the birth of the child than those who were cohabiting at the time of conception.

	Single Conception (n=890)		*Cohabiting Conception (n=103)*	
	Number	*Proportion*	*Number*	*Proportion*
Low education	480	71.5	48	36.4
Medium education	355	70.1	50	33.2
High education	50	69.3	2	8.3

Table 3. Number and Proportion of Women Marrying Following a Non-marital First Conception by Educational Level and type of Conception (N = 1,503).

7. MULTIVARIATE RESULTS

7.1 PARTNERSHIP CONTEXT OF FIRST CONCEPTIONS

Table 4 shows the stepwise discrete time competing risks models (Model 1 and Model 2). These models estimate the relative risk ratios of a single, cohabiting or marital first conception compared to no conception (baseline category) in a given month. Additional analysis is performed to examine the risk of a cohabiting and single conception as compared to a marital conception. The first model shows the effect of education on the risk of each type of conception controlling for period and age. Interaction effects between education and period are added in Model 2 to examine the changing influence of education on the risk of a first conception within different union types over time.

	Model 1			*Model 2*		
	S	*C*	*M*	*S*	*C*	*M*
Education						
Low	.88*	1.02	.84***	1.01	1.27	1.06
Medium (ref)						
High	.90	.60*	1.16*	1.17	4.82	1.22
Age	2.02***	1.84***	4.61***	2.02***	1.83***	4.56***
Age^2	.99***	.99***	.97***	.99***	.99***	.97***
Period						
1941-1960 (ref)						
1961-1970	1.01	2.10	.95	1.03	1.11	1.04
1971-1980	1.69***	4.55***	.89*	1.74**	3.86	1.10
1981-1990	1.54***	14.02***	.70***	1.77**	19.15**	.89
1991-2004	.93	18.15***	.24***	1.20	23.89**	.32***
Interactions						
1961-1970*low				1.01	2.45	.95
1961-1970*high				.84	.00***	.75
1971-1980*low				1.04	1.42	.79*
1971-1980*high				.65	.32	.73
1981-1990*low				.85	.71	.55***
1981-1990*high				.72	.09	1.21
1991-2004*low				.56**	.73	.45***
1991-2004*high				.81	.12	.93

Table 4. Results of the Competing Risks Models, Relative Risk Ratios, Base Outcome: No Conception (N = 761,980).

Note: S – single conception, C – cohabiting conception, M – marital conception

*p < .05, **p < .01, ***p < .001.

Model 1 shows how the risk of a single, cohabiting, and marital conception changes with education when controlling for period and age. Low educated women have a 12% lower risk of experiencing a single conception compared to medium educated women while there are no significant differences between medium and high educated women. Additionally, women with high education are 40% less likely to experience a conception within cohabitation than their medium educated counterparts; there are no significant differences between low and medium educated women. Finally, low educated women are 16% less likely than medium educated women to conceive within marriage. Similarly, medium educated women are 16% less likely than high educated women to experience a marital conception. These results suggest that education has a negative gradient for cohabiting conceptions and a positive gradient for marital and single conceptions.

From these results it is not clear whether there are significant differences in the effect of education on the risk of a single or cohabiting conception compared to a marital conception. For this aim, I change the baseline category in the discrete time

competing risks model to marital conception. The relative risk ratios of a single and a cohabiting conception compared to a marital conception are summarised in Figure 1. Higher educated women are less likely to experience both a single and a cohabiting conception compared to a marital conception than medium educated women. There are no significant differences between low and medium educated women. In other words, higher educated women are more likely to conceive within marriage than within cohabitation or while being single. All in all, these results indicate that education has a negative gradient of non-marital childbearing; highly educated women are less likely to experience a single as well as a cohabiting conception compared to a marital conception than their medium educated counterparts, holding other variables in the model constant.

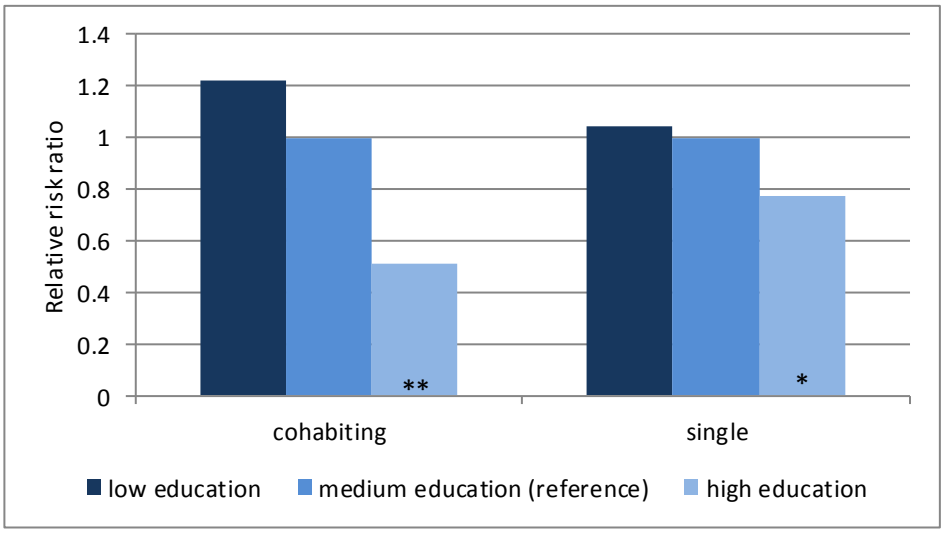

Figure 1. Relative risk ratios of a cohabiting and a single conception compared to a marital conception by education.
Note: *p < .05, **p < .01, ***p < .001.

To see whether and how the influence of education on the risk of a first conception within certain union types changed over time, I interpret the interaction terms between period and education. To facilitate the interpretation of the interactions, I calculate monthly predicted probabilities, estimated for a woman with average age with different educational levels for the different time periods. The predicted probabilities show that the probability of a single conception (Figure 2a) is slightly higher among medium educated women than among their higher and lower educated counterparts in all periods. Over time, the difference between medium and low

educated women increases. The significant interaction effect between period 1991-2004 and low education indicates that the positive gradient of education on the risk of a single conception has emerged after the transition, while before the transition educational differences in the risk of a single conception were not significant. Examining the significant main effects of period in Model 2 reveals that the probability of medium educated women to experience a single conception increased between 1971 and 1990. This also holds for women with medium levels of education (model not shown). Additionally, the probability of a cohabiting conception was very low between 1941 and 1970; after 1971, it started to increase gradually among all educational categories (Figure 2b). The interaction effects between period and education do not show a consistent pattern suggesting that the educational gradient of the probability of a cohabiting conception did not change much over time. Last, the educational gradient of a marital conception is positive in all time periods; more educated women are more likely to experience a marital conception than their less educated counterparts (Figure 2c). The significant interaction effects indicate that medium educated women were significantly more likely to experience a marital conception than their lower educated counterparts between 1971 and 2004. Until 1990, educational differences in the probability of a marital conception increased. However, after the transition, the differences seem to be smaller.

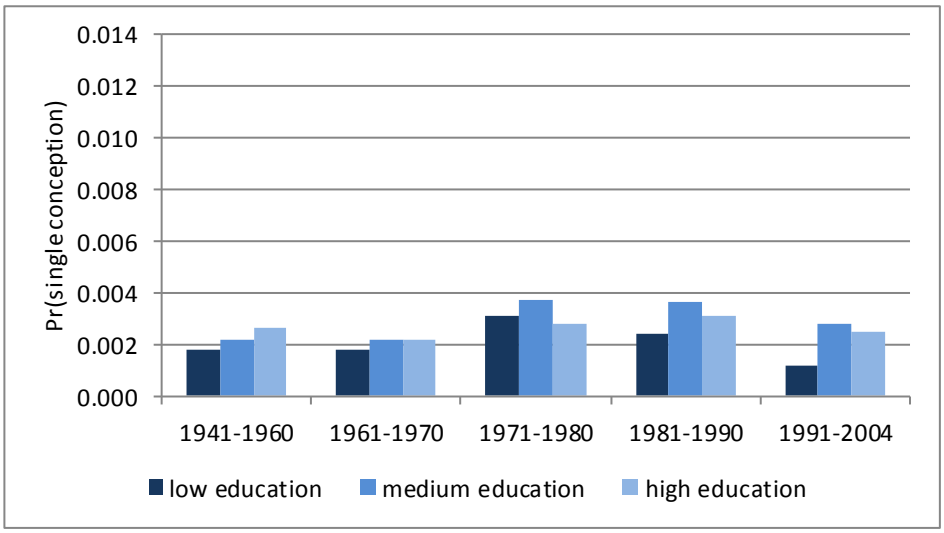

Figure 2a. Monthly predicted probabilities of a single conception by education and period.
Note: Predicted probabilities are calculated for a woman with average age.

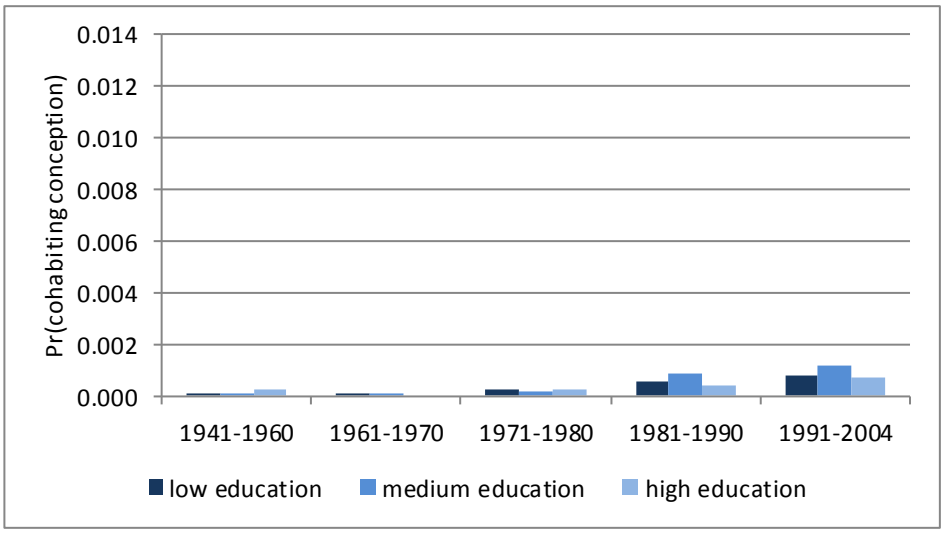

Figure 2b. Monthly predicted probabilities of a cohabiting conception by education and period.
Note: Predicted probabilities are calculated for a woman with average age.

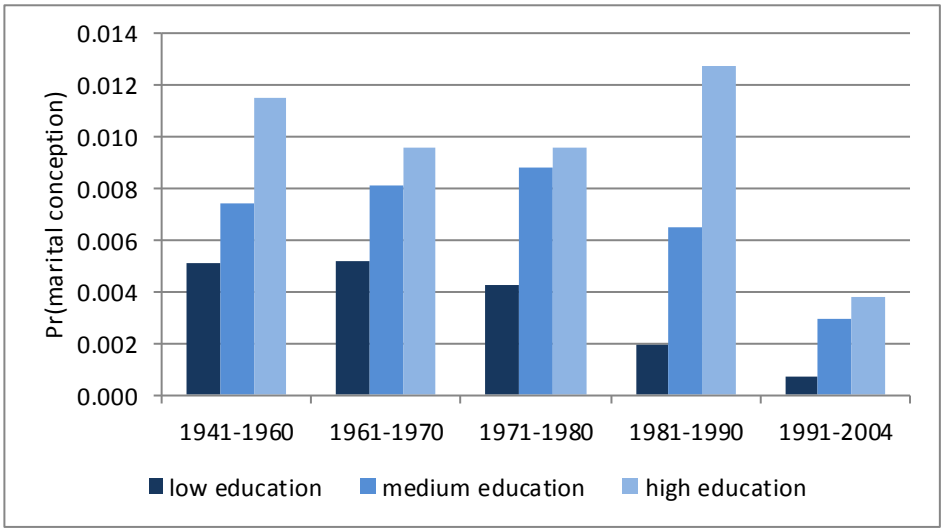

Figure 2c. Monthly predicted probabilities of a marital conception by education and period.
Note: Predicted probabilities are calculated for a woman with average age.

7.2 TRANSITION TO MARRIAGE

To examine whether and how education influences women's probability of marrying between a single or cohabiting conception and birth, I apply logistic regression models (Table 5). The results indicate that low educated women are almost 30% less likely to marry between conception and birth compared to their medium educated counterparts (Model 1). Interestingly, there are no significant differences in marriage risk between medium and high educated women. Furthermore, women who experience a conception while being single are more than 3.1 times as likely to marry

before the birth of the child as their counterparts who experienced a cohabiting conception. This effect, however, differs among women with different education, as indicated by the significant interaction effect between the type of non-marital conception and education (Model 2). Calculating the net interaction effect reveals that high educated women who experience a single conception are almost 1.4 times as likely to marry before the birth of the first child as their medium educated counterparts. Finally, there is little change in the risk of marriage after a non-marital conception over time before 1991. In 1991-2004 the risk of this transition was almost 70% smaller than in 1941-1960. This might indicate that shotgun marriages played an important role throughout the years before 1991.

	Model 1	Model2
Education		
Low education	.72*	.79
Medium education (ref)		
High education	1.05	.26
Type of conception		
Cohabiting conception (ref)		
Single conception	3.14***	3.07***
Age	1.38*	1.37*
Age^2	.99**	.99**
Period		
1941-1960 (ref)		
1961-1970	.81	.80
1971-1980	.75	.74
1981-1990	.65	.64*
1991-2004	.26***	.25***
Interactions		
Single*low		.89
Single*high		5.38*
Constant	.07	.08

Table 5. Results of the Logistic Regression Models, Dependent Variable: Marriage, Odds Ratios (N = 1,503).
Note: *p < .05, **p < .01, ***p < .001.

8. CONCLUSION AND DISCUSSION

There has been much debate in the literature about the role of education in non-marital childbearing. On the one hand, according to the Second Demographic Transition theory, higher educated women adjust their family behaviours in order to be able to fulfil their "higher order" needs. This means that these women are less likely to marry and, thus, are more likely to conceive within a non-marital union than their lower educated counterparts. On the contrary, some studies argue that the disadvantaged, lower educated women are more likely to have a child within these new types of family forms.

This article tested these contradictory expectations for the Hungarian setting by examining how the risk of a single, cohabiting, and marital conception is influenced by educational attainment. I found that higher educated women are less likely to experience a cohabiting conception compared to their medium educated counterparts. Interestingly, the risk of a cohabiting conception did not differ between low and medium educated women. This suggests that in Hungary, the divide is between medium and high educated women rather than between those with the lowest education and their more educated counterparts, which partly supports the Pattern of Disadvantage argument. Although, based on the Pattern of Disadvantage theory, one would expect women from the lowest educational groups to have the highest risk of a cohabiting conception, which is not the case here. This finding is partially in line with previous studies which found that education has a negative gradient of non-marital childbearing in Austria, France, West-Germany, Italy, the Netherlands, Norway, Russia and the UK (Perelli-Harris et al., 2010). Furthermore, in general, my findings corroborate Spéder (2004b) although he found significant differences between low and medium educated women when comparing their risks of a cohabiting conception and non-marital conception to a marital conception.

Additionally, in line with the expectations of SDT, I found that education has a positive gradient on the risk of a single conception; women with medium education are more likely to conceive while being single than their low educated counterparts. There were no significant differences between medium and high educated women; this suggests that the divide is between low and medium educated women when it comes to experiencing a single conception. A possible explanation for this finding might be that most medium and high educated single women had a non-resident

partner at the time of conception but, for example, due to economic obstacles (e.g. common housing) they could not afford moving together. The dataset did not allow for differentiating between co-resident and non-resident relationships. This result contradicts previous studies on the US and Western European countries which found that low educated women have a higher risk to conceive while being single (McLanahan, 2004; Perelli-Harris et al., 2010). Previous research did not examine the effect of education on a single conception in Hungary.

In addition, I found that in Hungary, more educated women are more likely to experience a marital conception than their lower educated counterparts. Similarly, when comparing the risk of a single and cohabiting conception to a marital conception, highly educated women are less likely to experience both a single and a cohabiting conception compared to a marital conception than their medium educated counterparts. This indicates that the educational gradient of non-marital childbearing compared to childbearing within marriage is negative. This finding is in line with the Pattern of Disadvantage argument and corroborates previous studies on Western European countries (Perelli-Harris et al., 2010) and in the region such as Romania (Hărăguş & Oaneş, 2009), Bulgaria (von der Lippe, 2009), Ukraine (Perelli-Harris, 2008) and the Czech Republic (Zeman, 2009).

Furthermore, I investigated whether and how the influence of education on the risk of a single, cohabiting, and marital conception has changed over time. The results indicated that the positive gradient of education on the risk of a single conception emerged after the transition; before 1990, differences between medium and low educated women were not significant. This finding is in line with the expectations of the SDT. Additionally, there were no consistent changes in the risk of a cohabiting conception by educational attainment over time. Finally, between 1971 and 2004, the positive gradient of education on the risk of a marital conception became weaker. This finding does not corroborate either the SDT or the Pattern of Disadvantage argument. All in all, I conclude that there were some changes in the educational gradient of a single and marital conception over time while this was not the case for cohabiting conceptions. It might be that I did not have enough statistical power to detect significant changes over time because this behaviour has only just started to emerge in Hungary. Moreover, the results also highlight that changes in family behaviours had already started before the transition. After 1971, the risk of a single and cohabiting conception increased both for low and medium educated

women while, at the same time, the risk of a marital conception declined. During these periods, Hungary was less isolated from Western Europe and the values and norms of people became more "Westernised". This result is in line with previous studies which examined union and family formation in Hungary and found that these behaviours had already started to change before the transition (Carlson & Klinger, 1987; Frejka, 2008; Spéder, 2005).

Last, I studied the influence of education on the probability of marrying between conception and birth among women who experienced a non-marital conception. I found that women with medium education are more likely to marry between conception and birth than their lower educated counterparts and there were no differences between medium and high educated women. Thus, it seems that in Hungary, women with medium and high levels of education find it most important to legitimise a non-marital conception via marriage. This finding does not corroborate either the SDT or the Pattern of Disadvantage argument. Additionally, the influence of education on marriage risks varies according to the type of conception; high educated women were 1.4 times as likely as their medium educated counterparts to marry following a single conception. These results are similar to earlier studies conducted in different contexts. For example, in Russia women with low education were found to be the least likely to marry following a single or cohabiting conception (Perelli-Harris & Gerber, 2011). Furthermore, I found that women who experienced a single conception are more likely to marry than those who experienced a conception within a co-residential union. It might be that women who conceive in cohabitation do not marry because this setting is increasingly seen to be suitable for childbearing. Another, probably more likely explanation is data related. Many of those women who do not live in a co-residential union might actually have a non-residential partner. In Hungary, due to constraints of the housing market, young couples often have limited opportunities to move in together. Although the GGS has asked respondents if they had a non-residential partner, unfortunately this question was only asked for the time of the interview and no retrospective information was collected. Thus, it may be that most single conceptions actually happened within a non-residential union.

Finally, some limitations of this study have to be mentioned. First, retrospective data might suffer from possible recall errors and misreporting. It can be expected that it is especially true in case of remembering the starting and ending date of several cohabiting relationships and less so in case of marriages or childbirths.

Conceptions to single women would, in this way, be overestimated relative to conceptions to cohabiting women. Second, some of the findings might be driven by the low prevalence of cohabiting conceptions during earlier time periods. It might be that I did not have enough statistical power to detect significant changes over time because conceptions within cohabitation only started to become more common in the latest periods. Third, the SDT is not only about the role of education but also about the role of values in the union and family formation process. As the dataset does not contain time-varying information on the values and beliefs of the respondents, this dimension was not included in the paper. Future research could further investigate this question when later waves of the survey become available. Last, the risk of non-marital childbearing might not only be influenced by education but also by other factors such as the type of settlement or religiosity. However, while the GGS holds detailed information on union and fertility histories, it does not include time-varying information on these determinants. Future research might be interested in studying the influence of other time-varying factors on the risk of a non-marital conception once later waves become available.

Nonetheless, this study is the first to investigate the changing impact of education on the risk of a first conception and birth in Hungary within different union types, differentiating between single and cohabiting non-marital conceptions and applying competing risks models. I showed that in Hungary, high educated women are less likely to experience a cohabiting or single conception compared to a marital conception than their low educated counterparts. Moreover, once a non-marital conception occurs, medium educated women are more likely to marry before the birth of the child then low educated women. These findings indicate that in Hungary, family formation behaviours vary by socioeconomic status and that, indeed, these behaviours might play a role in the reproduction of inequalities.

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