The Transition Generation's entrance to parenthood: Patterns across 27 post-socialist countries

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Abstract

We use micro-data and contextual indicators to explore differences in the timing of parenthood over a wide range of post-socialist countries. We focus on men and women who entered adulthood during the transition from communism in 27 countries. These countries represent six diverse geo-cultural regions. Using multi-level hazard models, we observe the differences between countries in the average timing of parenthood and how much can be explained by compositional factors, values and attitudes. We also observe the influence of economic context on first conception risks. Our results indicate that later entrance to parenthood in Eastern and Southeastern Europe compared to Russia, Belarus, Moldova and Ukraine is related to positive economic developments. Earlier entrance to parenthood in Central Asian Republics is related to religious affiliation. We find no significant differences in the timing of parenthood for the Caucasus, whereas no measures account for the earlier entrance to parenthood in Baltic States.

Extended abstract

Introduction

The age at which men and women enter parenthood has increasingly become of interest as we witness the postponement of parenthood across a variety of contexts. A large literature has developed on factors related to the age at first birth, both in terms of variation over time within a population and between subgroups of a population. Fewer studies have tried to explain variation across countries in the average age at entering parenthood, despite large and persistent differences in countries sharing contextual similarities and differences. We aim to fill this gap and learn more about how social, cultural and economic forces influence when adults experience one of the most significant life course events.

We employ an under-used resource, the Life in Transition Survey (LiTS), to observe how patterns of entering parenthood vary across 27 post-socialist countries. The countries in this sample represent six diverse geo-cultural groups, including EU members both in the Baltic region and Eastern Europe, Southeastern European countries, the Western Newly Independent States (WNIS), the Caucasus, and Central Asian Republics (CAR). The cohort we study entered adulthood as these countries were transitioning from state socialism or establishing independence. During this time period, every country in this group experienced considerable declines in fertility and no country has re-achieved the fertility rates of 1989. Despite these similarities, the countries we include have widely varying social, cultural and economic contexts, as well as contrasting fertility profiles. These similarities and differences provide the opportunity to better understand how individual and macro-level factors influence the timing of parenthood. Previous studies that have tried to understand the significant variation in the timing of parenthood in this region relied on descriptive information, aggregate level data or on a range of only a few countries (mostly from Eastern Europe). This is the first study to explore differences in the timing of parenthood across such a wide range of post-socialist countries.

The average age of women at first birth varies widely across post-socialist countries: In 2010, Slovenia had the oldest mean age at 28.7 and Armenia had the lowest mean age at 23.3 (Transmonee, 2012). The majority of old EU member states had a mean age higher than Slovenia in 2010 (UNECE Statistical Database), but the post-socialist demographic trends are increasingly similar to old EU member states in this respect. Nevertheless, many post-socialist states remain at an average age of first birth similar to that of the rest of Europe in the 1980s, despite the dramatic declines in fertility rates these countries experienced in the 1990s. The extent to which the most common explanation for the rise in age at entering parenthood in old EU member states is applicable to the post-socialist states has been questioned (Billingsley 2010). The Second Demographic Transition theory (Lesthaeghe & van de Kaa 1986) cites values and attitude changes as a main driver of delayed parenthood that begun in Northern Europe decades ago. Researchers on post-socialist countries have speculated about the impact of changes in values and attitudes that accompanied democratization and market reforms (Sobotka 2008; Zakharov 2008; Lesthaeghe and Surkyn 2002; Sobotka et al. 2003; Frejka 2008; Philipov and Jasilioniene 2008; Gerber and Berman 2010; Hoem et al. 2009). Yet little direct evidence exists of a link between values and attitudes and a later age at entering parenthood. While we do not focus on postponement patterns within countries, we explore variation in a few measures of attitudes and values and how it is linked to individuals' timing of parenthood.

SDT theory may not best explain dynamics across all post-socialist countries because of the uneven success of economic and political transformations across the region. As material conditions did not quickly improve in many countries that underwent transition, the development of post-materialist values may have been hindered. Indeed, a post-socialist pattern has been observed, whereby positive

economic developments appeared to be linked to the postponement of childbearing, whereas poor economic developments were not (Sobotka 2004; Billingsley 2010). However, this finding has not been explored with individual level and contextual-level data. We fill this gap by complementing the LiTS resource with time-series macro-level data for an unprecedented look at both macro and micro-level determinants on the timing of parenthood.

We begin by asking to what extent overall differences in the timing of first births between countries are due to the composition of the population, including differences in educational levels and urbanization. We then observe whether the differences between countries in the average timing of parenthood can be explained by differences in values, attitudes and the economic contexts.

Data and Method

The data used in this study is from the Life in Transition Survey (LiTS), which was collected by the European Bank for Reconstruction and Development in 2006. The survey was administered to 29 countries, including the 27 countries used in this study and Mongolia and Turkey. The sampling procedure began with primary sampling units selected on the basis of the "proportional to size" selection criteria. Respondents were aged 18 or over and were randomly selected from all members of the household. The average response rate across the countries was 63% for the household and the respondent response rate 72%. The sampling procedure was repeated until 1000 interviews were given in each country. The survey covered a wide range of issues and questions regarding current circumstances, but also mapped out the timing and occurrence of main life events since 1989. Respondents indicated in which years they had a child, but did not give information on which month. Because we are interested in conditions at the time that they conceived the child, we predated our event of interest by one year. In addition, we do not know about main life events before 1989, including childbearing, we therefore limit our sample to those who turned 16 in 1989 or later. This restricts our sample to the 1973-1985 birth cohorts, who are the men and women that entered adulthood at the dawn of the transition from communism or after. In total, we observe 3222 men, of which 929 had a first child before they were interviewed, and 4231 women, of which 2017 had entered parenthood.

The first conception risk is first viewed with piecewise constant hazard models, where we explore differences between geo-cultural country groups (results shown in this extended abstract). These results are compared to discrete hazard models that also include a random-intercept (we present baseline probabilities from these models here). Multi-level modeling ensures correct standard errors that otherwise would be biased by the clustering of observations within countries, while also allowing us to estimate the variance that exists at the country level. The first level in the model estimates the individual-level effects (respondents' characteristics) on first conception and the second level of the model fits the country effects, also accounting for the intra-country correlation not captured by the contextual indicators. Modeling conceptions in this way means we can estimate the contribution of the economic context to the average conception rate across countries. Odds ratios represent within-country and between-country effects and can be interpreted as the average effect of the independent variable as it changes across individuals and between countries.

Although our study is constructed on retrospective longitudinal data, we do not study the forces behind postponement within a country, which would require larger samples within each country or a wider span of birth cohorts and time period, as well as a research design where changes in the timing of parenthood are observed within a country. Rather, we focus on variation between average conception probabilities in one time period for a combined group of birth cohorts.

At the individual level, time-constant and time-varying indicators are used: ethnicity (titular or not) and country do not change over time, whereas age, educational level, urban/rural location, calendar year and a dummy variable controlling for whether there is a conflict are time-varying. At the contextual level, two time-varying explanatory variables are used: the unemployment rate and real GDP (logged), which are taken from the Transmonee Database (UNICEF) and the Health for All Database (WHO).

We have two main variables that we use to provide some information about values and attitudes. Our measures indicate whether respondents identify with a specific religion and their attitudes toward democracy. As discussed in the theoretical overview of SDT (forthcoming), childbearing behavior has been correlated with both religion and political attitudes in past research. The first question asks "What is your religion?" We collapse responses into four categories: Christian, Muslim, other religion, and atheist/not religious. The second question reflects governance preference: "With which one of the following statements do you agree most: 1) Democracy is preferable to any other form of political system; 2) Under some circumstances, an authoritarian government may be preferable to a democratic one; or 3) For people like me, it does not matter whether a government is democratic or authoritarian". Both of these measures were created from questions asked in 2006, whereas we are observing an event potentially occurring between 1989 and 2006. To the extent that religious affiliation and attitudes toward governance change, these questions may not represent attitudes or values at the time of the event. Religious affiliation is generally considered a stable characteristic over time; however attitudes toward governance may be time-variant, particularly if they reflect experiences with governance. We are more cautious with interpretations of the latter variable for this reason.

To maximize our small sample size within countries and explore differences among various regions, the following groups were created that reflect shared geographical or cultural characteristics:

Eastern Europe (EE): Bulgaria, Czech Rep., Hungary, Poland, Romania, Slovakia, Slovenia
Southeastern Europe (SEE): Albania, Bosnia, Croatia, Macedonia (FYROM), Montenegro, Serbia
Baltic countries: Estonia, Latvia, Lithuania
Western Newly Independent States (WNIS): Belarus, Moldova, Russia, Ukraine
Caucasus: Armenia, Azerbaijan, Georgia
Central Asian Republics (CAR): Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan

Results

Our results indicate that a random intercept model is necessary (Figure 1); even after controlling for compositional differences in the population (based on education and urban residence in particular), there is significant variation in the average propensity of the timing of the first birth (because having one child is mostly universal across this range of countries, we discuss the results in terms of timing rather than occurrence). The full results of the baseline piecewise constant model are seen in Table 1.

Table 2 displays our main covariates of interest. The macro-economic context appears to be associated with differences in the timing of first conceptions, because both the unemployment rate and GDP per capita (logged) show a negative association with the timing of first birth. When the unemployment rate increases, first births are delayed for both women and men, although the association for men is only weakly significant. However, increases in real GDP also lead to postponed parenthood for both men and women. The average effect on the first birth hazard is larger for increased GDP per capita and is particularly strong for men. These contradictory findings related to the effect of economic indicators will be further explored by interacting with country groups.

We also find evidence in Table 2 that values, measured at the individual level, are influential as well. Taking religious affiliation as an indicator of traditional family values, it is not surprising to see that atheist men enter parenthood later than Christian men (although this result is only weakly significant). Between religious groups, Muslim women enter parenthood earlier than Christian women. Observing the influence of governance preference revealed that men and women who are committed to democracy are the most likely to postpone parenthood. Men who agreed that an authoritarian government may be preferable to a democratic one under some circumstances or the type of government does not matter had similarly higher risks of entering parenthood than men committed to democracy. In contrast, women who could conditionally accept authoritarian governance did not have statistically different relative risks than women who favored democracy.

Figures 2 and 3 display differences in the average first birth hazard across geo-cultural groups after accounting for compositional differences. The WNIS countries (Belarus, Moldova, Russia and Ukraine) comprise the reference group. Men's conceptions rates are higher than in WNIS only in CAR, but this difference was not statistically significant. A later age at entering parenthood is particularly noted in the Eastern and Southeastern European countries. None of the contextual or individual characteristics available explain these differences for men. In contrast, women in CAR, Caucasus and Baltic States all have higher average first birth hazards than women in the WNIS, although the difference for women in the Caucasus was not statistically significant. Including additional individual characteristics reveals that earlier parenthood of women in CAR is related to their religious affiliation. Conversely, later parenthood for women in Eastern Europe and Southeastern Europe appears mostly related to the economic context because those indicators account for the statistically significant differences in relation to WNIS. Earlier parenthood in the Baltic States cannot be explained by any of these indicators. In addition, although governance preference had an independent effect on conceptions, it did not explain any differences in average rates across country groups for women or men.

Table 1. Baseline piecewise constant hazard model

	Men		Women	
	relative risk	standard errors	relative risk	standard errors
Age				
16-18	0.26 ***	0.04	0.44 ***	0.04
19-21	1		1	
22-24	2.65 ***	0.24	1.09	0.08
25-27	3.25 ***	0.68	0.98	0.12
28+	4.06 ***	0.68	0.81	0.16
Urban	0.83 *	0.08	0.80 **	0.06
Year				
1989			0.83	0.33
1990	1.58	1.09	1.50	0.39
1991	2.65 *	1.01	1.48 +	0.32
1992	2.17 **	0.57	1.84 ***	0.28
1993	1.2	0.40	1.92 ***	0.21
1994	1.61 *	0.37	1.54 **	0.20
1995	1.84 **	0.38	1.60 ***	0.21
1996	0.84	0.20	1.33 *	0.16
1997	1.31 +	0.22	1.14	0.15
1998	0.98	0.20	1.30 *	0.13
1999	1.00	0.19	1.17	0.14
2000	1		1	
2001	0.94	0.12	0.91	0.11
2002	0.77 *	0.10	0.93	0.10
2003	0.97	0.17	0.98	0.12
2004	0.84	0.15	0.82 +	0.09
2005	0.53 **	0.10	0.61 **	0.09
Conflict	0.84	0.35	0.92	0.19
Not titular ethnicity	0.94	0.11	0.92	0.09
Education				
in education	0.56 ***	0.06	0.37 ***	0.03
low	0.95	0.13	1.26 *	0.14
middle	1		1	
high	1.06	0.11	1.07	0.07
# of subjects	3222		4231	
# of failures	929		2017	
time at risk	25911		28111	

Table 2. Selected results from individual-level piecewise constant hazard models, relative risks adjusted for non-independence within countries

	Men		Women	
Unemployment rate		0.985 †		0.987***
Real GDP per capita (log)		0.764***		0.829**
Religious affiliation Reference group: Christian	Muslim	1.188	Muslim	1.395***
	Atheist	0.752†	Atheist	0.873
	Other	0.993	Other	1.027
Governance preference Reference group: democracy	Authoritarianism	1.220*	Authoritarianism	1.030
	Doesn't matter	1.235**	Doesn't matter	1.137*

Note: All results summarized here are from models in which each independent variable was introduced into the model separately, not stepwise.

Figure 1. Country ranking by intercepts: Baseline probabilities of the first conception

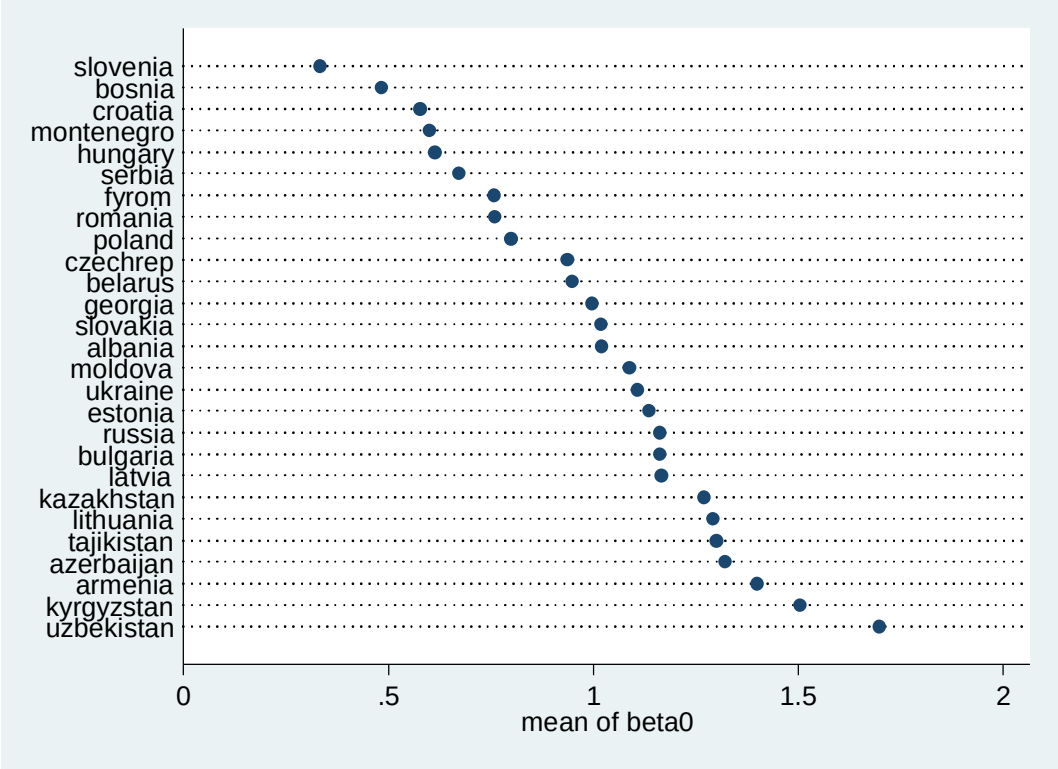
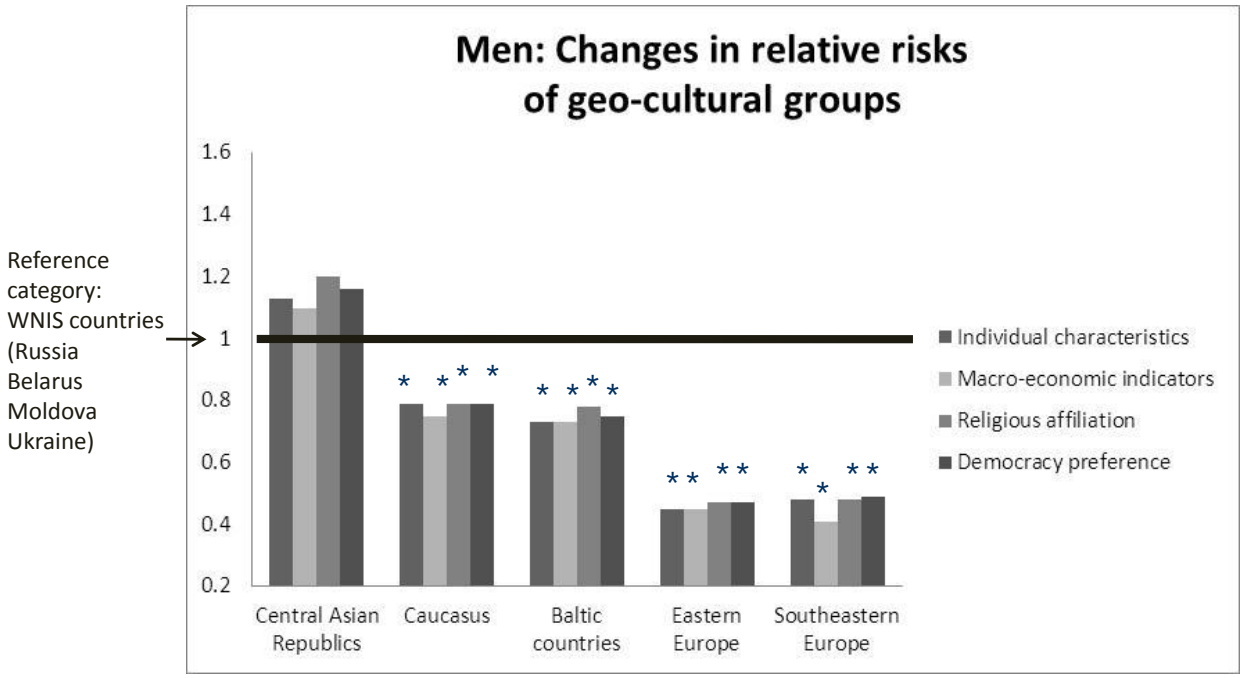
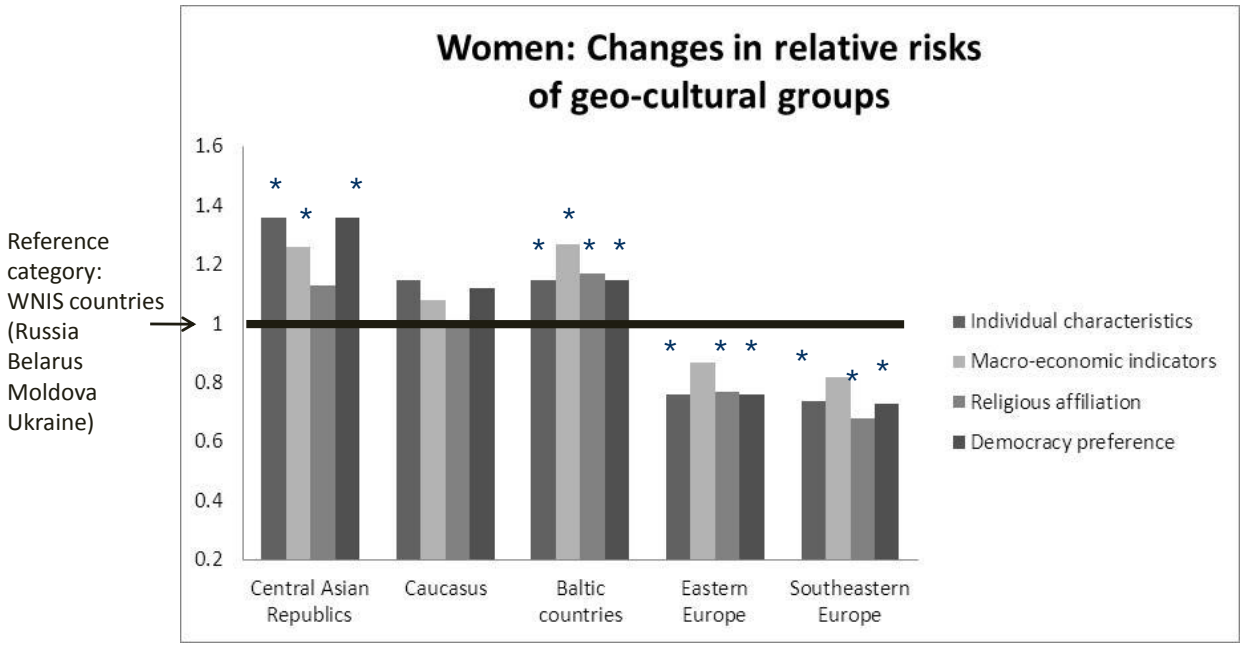


Figure 2. Explaining group differences away with economic and values indicators for men



Note: The reference category is the WNIS group (Belarus, Moldova, Russia, Ukraine), which takes a value of 1 for each model. All results with * are at least significant at the 5% level. Model controls for age, year, education, conflict, urban/rural residence and ethnicity.

Figure 3. Explaining group differences away with economic and values indicators for women



Note: The reference category is the WNIS group (Belarus, Moldova, Russia, Ukraine), which takes a value of 1 for each model. All results with * are at least significant at the 5% level. Model controls for age, year, education, conflict, urban/rural residence and ethnicity.

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