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

Billingsley, S., SPaDE: Linnaeus Center on Social Policy and Family Dynamics in Europe, Demography Unit, Stockholm University, and SCOHOST, Södertörns University

Duntava, A., SPaDE, SPaDE: Linnaeus Center on Social Policy and Family Dynamics in Europe, Demography Unit, Stockholm University

Abstract

The postponement of childbearing in countries that were formerly state socialist has been the subject of much debate. This study is the first to use micro-data and contextual indicators to explore the postponement of parenthood over a wide range of post-socialist countries. We focus on the men and women who entered adulthood during the transition from communism in 27 post-socialist countries, using the Life in Transition Survey (LiTS). These countries share a few specific characteristics in recent history and, to varying degrees, at least three emerging characteristics: new lifestyle and consumption opportunities, wage dispersion and a privatized housing market. They also represent at least six diverse geo-cultural groups or regions. Using piecewise constant hazard models and multi-level discrete hazard models, we observe the influence of individual and contextual-level indicators on first conception risk as well as isolate factors that explain differences in the timing of first conception between geo-cultural regions.

Introduction

The World Bank announced in 2008 that the "transition" is over for the countries that have now joined the EU (Alam et al. 2008), whereas some former Soviet Republics have made little progress toward achieving stable democratic and market-oriented institutions. Besides this remarkable divergence as well as persistent variation in economic performance across these countries, lasting historical and cultural legacies that are unique to each country also may have important demographic consequences. In this study, we explicitly observe how patterns of entering parenthood are different within this group of countries and attempt to assess how the social and economic context shapes these differences.

This study focuses on the men and women who entered adulthood when or after the transition from communism began. The Life in Transition Survey (LiTS) was administered to 27 countries that share a history of a state socialism. We focus on the most recent cohorts across these different countries, for which we have complete fertility histories. These 27 countries represent at least six diverse geo-cultural groups or regions, 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).

Why is a comparison of these 27 countries useful? A few specific characteristics of recent history lend these countries a partially shared identity. The birth cohorts under study were all born into and raised in a home where both parents had access to secure jobs and women were widely supported in their roles as mothers and as workers. By the time they entered adulthood, the transition had just commenced or was already underway and the new contexts shared, to varying degrees, at least three emerging characteristics: new lifestyle and consumption opportunities, wage dispersion and a privatized housing market. These important factors increased both the need and the desire for young people to accumulate earnings, which may have influenced the timing of parenthood.

Massive declines in fertility accompanied the transition from communism, with no country maintaining or re-achieving fertility rates from before 1989. However, very different processes seem to underlie these widespread fertility declines (Billingsley 2010; Sobotka 2008; Frejka 2008). For example, the postponement of childbearing was an important cause of the fertility decline in many Eastern European countries and improving economic conditions appear to be linked to this postponement (Sobotka 2004; Billingsley 2010). Value and attitude changes that accompanied democratization and market reforms and are related to the Second Demographic Transition theory have been widely argued to explain postponement of parenthood and the decline in fertility (Sobotka 2008; Zakharov 2008; Lesthaeghe and Surkyn 2002; Sobotka et al. 2003; Frejka 2008; Philipov and Jasilioniene 2008; Gerber and Berman 2009; Hoem et al. 2009). This paper aims to shed light on the validity of different explanations for differential timing of parenthood.

Previous studies that have tried to understand the significant variation in fertility and postponement 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 study is the first to use micro-data and contextual indicators over a wide range of post-socialist countries. We primarily focus on variation between average conception probabilities in one time period. The micro data allows us to eliminate variation in country averages based on compositional differences in educational attainment and urbanization, as well as observe the independent influence of values and culture, which are captured with religious affiliation and governance preference.

The first question addressed in this study is whether the differences between first conception rates between groups of these countries, which are grouped on the basis of shared geo-cultural contexts, can be explained by differences in economic performance, measured with real GDP and unemployment rates, or values and culture, measured with religious affiliation and governance preference. We focus on variation between countries as an average over a time period for a select cohort. In addition to observing average rates, the study aims to identify recent trends in the timing dispersion and postponement of first conception. (only some findings are presented here)

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. 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.

The first conception risk is first viewed with piecewise constant hazard models. These results are compared to discrete hazard models that also include a random-intercept. 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 or group level as well as properly model the impact of contextual indicators. The first level in the model estimates the individual 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.

At the individual level, time-constant and time-varying indicators are used: ethnicity and country do not change over time, whereas age, education, urban/rural location, year and whether there is a conflict are able to change. At the contextual level, two 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).

Country groups reflect shared geographical or cultural characteristics and are constructed in the following way:

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

Results (Preliminary)

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. Summary results of individual-level piecewise constant hazard models, 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: Christian	Muslim: (+) 1.188	Muslim: (+) 1.395***
	Atheist: (-) 0.752†	Atheist: (-) 0.873
	Other: (-) 0.993	Other: (+) 1.027
Governance preference: democracy as reference	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

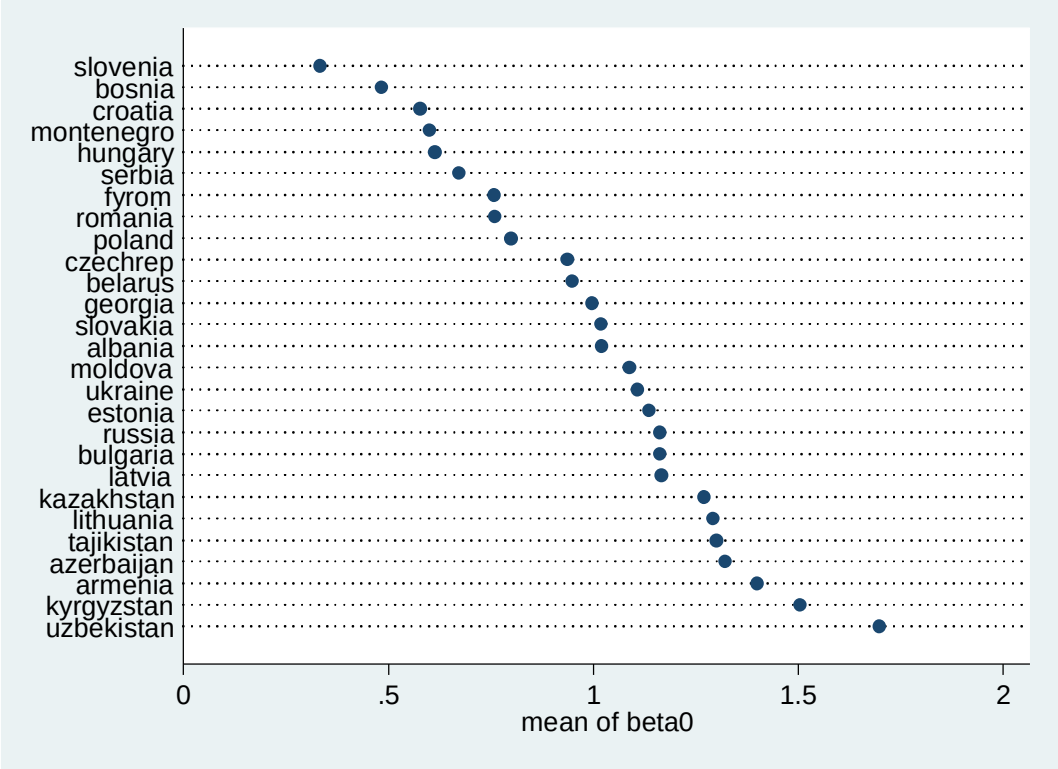
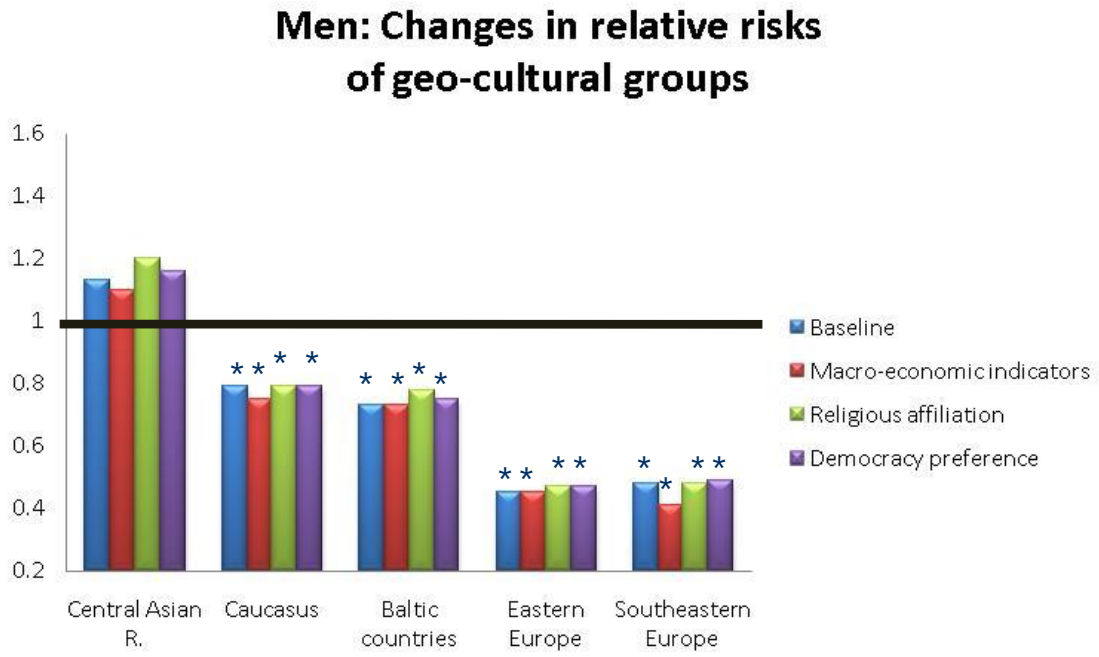
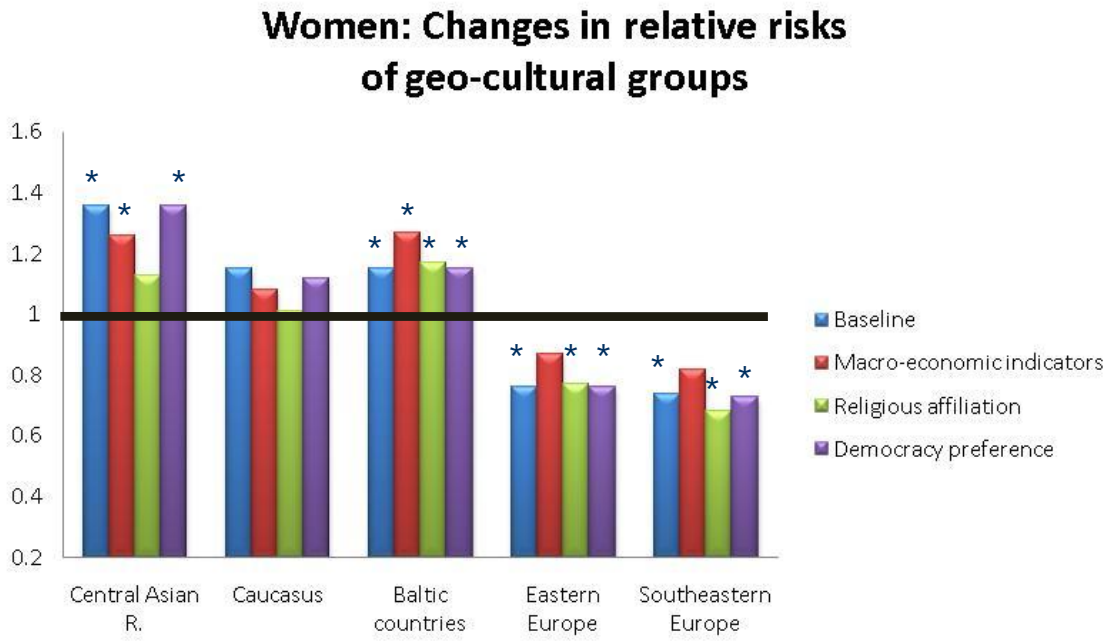


Figure 2. Explaining group differences away with economic and values indicators for men



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

Preliminary Discussion

Our results indicate that a random intercept model is necessary (Figure 1) and that the macro-economic context influences the timing of first conceptions. Unemployment rate increases and increases in real GDP lead to postponed parenthood for both men and women (Table 2). However, we also find evidence that values, measured at the individual level, are influential as well. Taking religious affiliation as an indicator of a traditional family orientation, it is not surprising to see that Muslim women enter parenthood earlier than Christian women and that atheist men enter parenthood later than Christian men. Observing the influence of governance preference revealed that men and women who are committed to democracy are the most likely to postpone parenthood.

If we look at how conception rates vary across groups of countries sharing geo-cultural characteristics, it appears that the differences between most groups in relation to men's conceptions are greater than for women's conceptions and none of the contextual or independent level characteristics available explain these differences for men. In contrast, there are no significant differences between conception rates for women in the Caucasus and the WNIS countries once compositional differences are accounted for. Earlier parenthood of women in the CARs is explained by religious affiliation. Conversely, later parenthood for women in East Europe and Southeast Europe appears mostly related to the economic context and earlier parenthood in the Baltic States cannot be explained away with any of these indicators. In addition, although governance preference had an independent effect on conceptions, it did not explain any country group differences in average rates for women.

References

Alam, A., Casero, P., Khan, F., & Udomsaph, C. (2008). Unleashing prosperity: Productivity growth in Eastern Europe and the Former Soviet Union. The World Bank.

Billingsley, S. (2010). The post-communist fertility puzzle. *Population Research and Policy Review, 29*(2): 193-231.

Frejka, Tomas. 2008. "Determinants of Family Formation and Childbearing during the Societal Transition in Central and Eastern Europe." *Demographic Research.* 19: 139-170.

Hoem, Jan M., Dora Kostova, Aiva Jasilioniene, and Cornelia Muresan. 2009. "Traces of the Second Demographic Transition in Central and Eastern Europe: Union Formation as a Demographic Manifestation." *European Journal of Population.*

Lesthaeghe, Ron and Johan Surkyn.. 2002. "New Forms of Household Formation in Central and Eastern Europe: Are They Related to Newly Emerging Value Orientations?" *UNECE,* 17 *Economic Survey of Europe* 1: 197-216.

Philipov, Dimiter and Aiva Jasilioniene. 2008. "Union Formation and Fertility in Bulgaria and Russia: A Life Table Description of Recent Trends." *Demographic Research.* 19: 2057-2114.

Sobotka, Tomas. 2008. “The Diverse Faces of the Second Demographic Transition in Europe.” *Demographic Research.* 19: 171-224.

Sobotka, Tomas, Krystof Zeman, and Vladimira Kantorova. 2003. “Demographic Shifts in the Czech Republic after 1989: A Second Demographic Transition View.” *European Journal of Population.* 19: 249-77.

Zakharov 2008. “Russian Federation from the First to the Second Demographic Transition.” *Demographic Research.* 19: 907-72.