

West and East: convergence or divergence of Millennials' transition to adulthood in four European countries

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Abstract

The invention of the Internet and rapid technological advancements have transformed Millennials (born between 1980 and 1999) into the first generation that is truly global in its connectivity and experiences. To what extent are the changes in the transition to adulthood for Millennials global and universal? We compared Millennials in France, Finland, Estonia, and Russia to answer this question.

Using data from the European Social Survey (conducted in 2006 and 2018), we examined six key events that mark adulthood: completion of professional education, leaving the parental home, first employment, first cohabitation, first marriage, and first childbirth.

By comparing the structure, timing, and tempo of the occurrence of these starting events in the selected countries, we found that the transition to adulthood is becoming more unified but still retains country-specific characteristics. Socioeconomic events occur for the majority of Millennials (50-90%) at the ages of 18-20 in a more gradual way in France and Finland, and more abruptly in Estonia and Russia. Cohabitation is the most common event from the demographic part of transition to adulthood. In comparison to cohabitations, first marriages and childbirth occur for less than 50% of respondents and at much older ages. Russians have the highest prevalence of these events and experience them at a younger age.

Keywords

childbirth, event history analysis, generations, leaving parents, life course, marriages, second demographic transition, timing

JEL codes: J62, Z13, N3, J12, J13

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Introduction

This paper aims to build on prior research on the transition to adulthood (TA) using new comparable data from the European Social Survey (ESS). Previous studies have identified a shift towards a scenario of “late, protracted, and complex” TA (Billari and Liebroer 2010). However, distinctions persist between Western and Eastern demographic behaviors in Europe which is evident in marital and childbearing trends (Hajnal 1965). Data from the Generations and Gender Survey (2004–2005) revealed that Estonia and Russia experience these events earlier, with a larger proportion of the population compared to France (Mitrofanova 2017, 2023).

This paper explores France, Finland, Estonia, and Russia within their shared European context, accounting for unique historical, cultural, social, political, and demographic differences. We broaden previous research by including younger cohorts, additional country (Finland), and expanding employed methodological tools. At the same time, we sharpen the focus by analyzing only Millennials (born between 1980 and 1999). Additionally, we categorize Millennials into two cohorts: those born between 1980 and 1989 and those born between 1990 and 1999. We examine whether Millennials from different countries have become more similar and converged in their sociodemographic behaviors due to globalization (following the assumptions of the Second Demographic Transition theory) or if they have retained country-specific patterns of TA (following the assumptions of the Hajnal line).

We quantify TA through a set of key sociodemographic events: completion of professional education, leaving the parental home, first employment, first cohabitation, first marriage, and first childbirth. Using data from two waves of the European Social Survey (ESS, 2006 and 2018, $N=3,651$), we analyze the occurrence of these events, focusing on three aspects: structure (the shares of the population that experienced the events of interest), timing (median ages of event occurrence), and tempo (Event History Analysis).

Theoretical background

Transition to adulthood

The transition to adulthood (TA) has evolved as a concept within diverse social sciences, drawing from biology, anthropology, psychology, social studies, and demography over the past century.

Psychological theories of the 20th century explored TA through phenomena such as adolescence (Hall 1904), biological maturation (Werner 1926), physical maturation (Offer 1984), and psychosexual development (Freud 1936). Various perspectives emerged, viewing TA either as an aspiration for individuality and independence, aiming at self-fulfillment (Spranger 1925; Blos 1967; Buhler 1971), or as a process of mastering role models and societal skills (Hofstätter 1954; Heitmeyer and Hurrelmann 1988). In psychology, TA has been defined through frames such as “emerging adulthood,” “young adulthood,” and “youth” (Arnett 2012).

In the 1920s, psychologists introduced a concept that would later become highly influential for social scientists—the Life Course Approach (LCA). The primary objective of LCA is to analyze an individual’s life from various perspectives, encompassing biological, social, and cultural dimensions, as human development is an ongoing and continuous process throughout one’s entire life. LCA is frequently chosen as the most suitable tool for studying TA from a multidisciplinary perspective (Alwin 2012).

In the 1970s, social scientists still regarded TA as part of an age-oriented system, with predetermined age tasks and rites of passage marking TA (Neugarten and Datan 1973). Societal perspectives on TA varied depending on factors such as culture, biological features, gender, race, and socioeconomic status (Featherman and Lerner 1985; Hagestad and Neugarten 1985). Modern sociology has benefited significantly from LCA, redefining TA as a prolonged process consisting of several events that introduce new social roles and statuses into individuals' lives (Elder 1975; Modell et al. 1976). Subsequently, social research has focused on the factors influencing the timing and sequence of these events (Hogan and Astone 1986; Rindfuss et al. 1987; Shanahan 2000; Settersten et al. 2005; Furstenberg 2010).

For demographers, TA has become a phenomenon encompassing events in the first third of life, crucial for understanding demographic behavior patterns. Demographers align with sociologists, studying TA through an analysis of events marking the onset of adulthood. A consensus regarding these events includes completion of professional education, leaving the parental home, first employment, first cohabitation, first marriage, and first childbirth (Buchmann 1989; Liefbroer 1999; Billari et al. 2005; Vikat et al. 2007). LCA has provided a framework, enabling demographers and sociologists to operationalize TA and employ quantitative methods to explore the structure, quantity, timing, tempo, and sequence of sociodemographic events occurrence.

As half of TA events are demographic, it is useful to investigate demographic theories that provide conceptual frameworks for systematizing trends in demographic behaviors across countries and epochs. The Second Demographic Transition (SDT) theory, pioneered by D. van de Kaa (1987) and R. Lesthaeghe (1995, 2020), explains the roots and directions of demographic modernization across countries. Patterns of SDT, such as a decrease in marital and fertility rates, an increase in cohabitations and non-marital childbearing, and the postponement of marriages and childbearing, align with TA processes, allowing for a combined study. When studies reveal intervals between countries transitioning from one matrimonial preference to another (Puur et al. 2012a, 2012b), we can infer similar shifts in TA.

F.C. Billari and A.C. Liefbroer (2010) proposed the idea of transitioning from “early, contracted, and simple” patterns of TA to “late, protracted, and complex”. Their analysis of the timing, tempo, and sequence of events occurrence revealed that the convergence of TA patterns across different countries is plausible in the future. Conversely, there is empirical evidence supporting the idea of divergence. The Hajnal line (Hajnal 1965) divides European countries into Western and Eastern parts based on similar matrimonial patterns. Western countries completed the transition from early and universal marriage to late and selective by the 19th century, whereas some Eastern countries did not achieve this transition even by the mid-20th century.

Other scholars have also explored regional peculiarities in demographic behavior. M. Buchmann (1989) highlighted the unique character of each country in terms of social norms. A. Cavalli and O. Galland developed a geographical classification based on macro regions and the strength of family ties (L'allongement de la jeunesse 1993). D. Reher (1998) studied devotion to the family institution in Northern Europe (weak ties) and Southern Europe (strong ties). G. Esping-Andersen (1990, 2002; *Family formation... 2007*) categorized measures of family support based on welfare regimes in Europe and suggested the potential emergence of a “pan-national” regime that closely aligns with the current liberal one.

Frequently, scholars yield conflicting results, presenting evidence both for divergence and convergence assumptions. In our prior studies utilizing the Generations and Gender Survey (Mitrofanova 2017, 2023), we found that Estonia and Russia share a similar timing of

TA events occurrence. However, the temporal patterns indicate that Estonia is more closely aligned with France. Simultaneously, sequence analysis demonstrates a convergence of TA patterns for the youngest generation (1970-1979).

Choice of countries

This research builds upon the previous study of France, Estonia, and Russia by adding another country – Finland. All four countries belong to the same continent and share pivotal historical events and processes such as World Wars, industrialization, urbanization, and demographic modernization. Despite their apparent similarities, these countries exhibit considerable diversity in terms of cultural, institutional, socioeconomic, and demographic development. France stands out as one of the pioneers in demographic modernization. Urbanization and industrialization began there earlier than in the other three countries and, to some extent, stimulated the First and Second Demographic Transitions. Additionally, France was among the early adopters of educational reforms and new contraceptive technologies (Blum et al. 2009). Finland and Estonia both lie almost on the Hajnal line, and their positions could be interpreted differently. Moreover, both countries shared a common political history with the Russian Empire/USSR during 1809-1917 (Finland) and 1940-1991 (Estonia).

During its more than a century as a part of the Russian Empire, Finland maintained a high level of autonomy, a commitment to Protestant ethics, and many characteristics common to the Baltic region. Research indicates that the characteristics of the Finnish population and the Baltic area began to converge towards modern patterns (Plakans 1984). Estonia, having been a part of the USSR for half a century, accumulated norms and values common to Soviet republics among existing generations. However, Baltic and European identity were strong in Estonians, leading them to demographically converge with Western Europeans after the dissolution of the Soviet Union (Nugin et al. 2016). Originally adhering to an Eastern European model of matrimonial behavior according to the Hajnal concept, Russia has undergone transformation towards European patterns of TA in recent studies (Blum et al. 2009). The Russian population, in general, exhibits more “traditional” patterns of sociodemographic behavior, including a higher share of marriages and childbearing compared to other countries in question, younger ages for these events occurrence, smaller intervals between events, and less variation in life-course scenarios (Puur et al. 2012a; Mitrofanova 2017).

Thus, we selected one typical Western European country pioneering in sociodemographic changes (France), one European country with a shared past with the Russian Empire (Finland), one European country with a shared past with the USSR (Estonia), and modern Russia, which inherited roots shared with two listed neighbors. We assume that the closer the common past, the more similarities we will reveal between the countries. Therefore, we expect to find France and Russia at opposite ends of the sociodemographic continuum of TA patterns; Finland will be closer to France, and Estonia will be closer to Russia.

Generations and genders

The generational factor emerges as a crucial element in understanding historical development dynamics within this research. N. Ryder’s approach advocates for the use of the term “cohort” in scientific discourse, offering grouping the individuals based on the same time of events occurrence, e.g., the same time of birth. Ryder suggests excluding the term “generation” from scientific papers and leave it only for general usage (Ryder 1985).

Contrastingly, K. Mannheim's perspective (1970) injects a more sociological dimension into the concept of a generation. Mannheim contends that a generation is not solely defined by a common time of birth but also by the "social location" of this social group, which binds its members throughout their entire lives. Among modern generational approaches, various theories exist for each country, absorbing the historical specifics of each. However, one of the most popular theories, based solely on American history, didn't work well for other societies (Howe and Strauss 1992, 2007). Nevertheless, this theory coined labels for generations that became popular not only in the media but also in scientific research. The term "Millennials" is one such label, derived from the idea that this generation was born and raised during the turn of a new millennium, a thrilling event for its contemporaries. Hence, Howe and Strauss, who developed their theory in the 1990s, couldn't avoid allusions to this major symbol.

The original Howe and Strauss's research identified Millennials as born between 1982 and 2000, but in later research papers, these boundaries were reconsidered multiple times. For comparability of this generation in the four chosen countries, we will use the round years of boundaries: from 1980 till 1999. This generation can be called the first truly globalized one because they socialized in the era of the expansion of the Internet, gadgets, TV shows, and music channels common for all youth from developed and developing countries. Studies show that values and behaviors of this generation are quite similar and synchronized with age peers because of this shared "social location" (Bennett et al. 2008; Dutzik and Inglis 2014; Inglehart 2018). Along with similarities, it is also important to consider heterogeneity within every generation. For the investigation of TA patterns, it is pivotal to focus additionally on gender because it determines many differences in demographic behavior and other starting events occurrence (Andersson and Scott 2007; Aronson 2008; Craig and Foster 2013). Usually, women tend to experience their demographic events earlier than men. It is also important to assess the behavioral changes of those Millennials who lived at least some part of their life before the Berlin Wall fell and those who were born after its fall. That is why we divided the generation we are going to analyze into two cohorts: the older Millennials (1980-1989) and the younger ones (1990-1999).

Hypotheses

Hypotheses of the study:

H1. Transition to adulthood (TA) of Millennials among chosen countries:

H1.1. The structure and timing of socioeconomic events are generally similar across all four countries. However, France and Finland share more common patterns, as do Russia and Estonia.

H1.2. Demographic events exhibit country-specific variations. Finland closely resembles France, showing a postponement of demographic events' onset and a drastic decrease in event occurrences in the life courses of Millennials. Russia demonstrates the highest shares of marriages and childbirth, with the youngest ages for these events. Estonia is closer to Russia in this regard, although patterns of cohabitations are more similar to those in France and Finland.

H2. Intragenerational patterns of TA of Millennials:

H2.1. The younger cohort of Millennials (born 1990-1999) experiences fewer events marking TA and encounters younger ages of events occurrence than the older cohort (born 1980-1989). This is partially attributed to age effect (or event censoring).

H2.2. Women experience the onset of demographic events one to two years earlier than men, while the onset of socioeconomic events tends to be more gender-neutral.

Data and methods

Data

The study relies on data from the European Social Survey (ESS) collected during the 3rd wave in 2006 and the 9th wave in 2018, encompassing responses from France, Finland, Estonia, and Russia. The ESS, being a pan-European survey, includes a specific set of questions dedicated to TA process (Billari et al. 2005).

A limitation of the dataset is that all dates were collected with a precision of a year, but the set of events aligns with the demographers’ consensus (Buchmann 1989; Liefbroer 1999; Billari et al. 2005; Vikat et al. 2007). The study divides six starting events into socioeconomic (completion of professional education, leaving parental home, and first employment) and demographic ones (first cohabitation, first marriage, and first childbirth).

In the context of the ESS questionnaire, leaving parental home refers to the time when respondents lived separately from their family for at least two months. First employment is considered when a respondent officially worked for at least three months. First cohabitation is defined as a union without official registration but with partners living together under one roof for at least three months. While completion of professional education is not a starting event per se, it plays a pivotal role in initiating a professional career and is counted as one of the TA markers.

The analysis of TA patterns is conducted on various dimensions, including by countries, by genders, and by cohorts. The two cohorts examined are the older Millennials, born between 1980 and 1989, and the younger ones, born between 1990 and 1999. The absolute numbers of respondents are provided in Appendix 1, and the distribution of shares is presented in Figure 1.

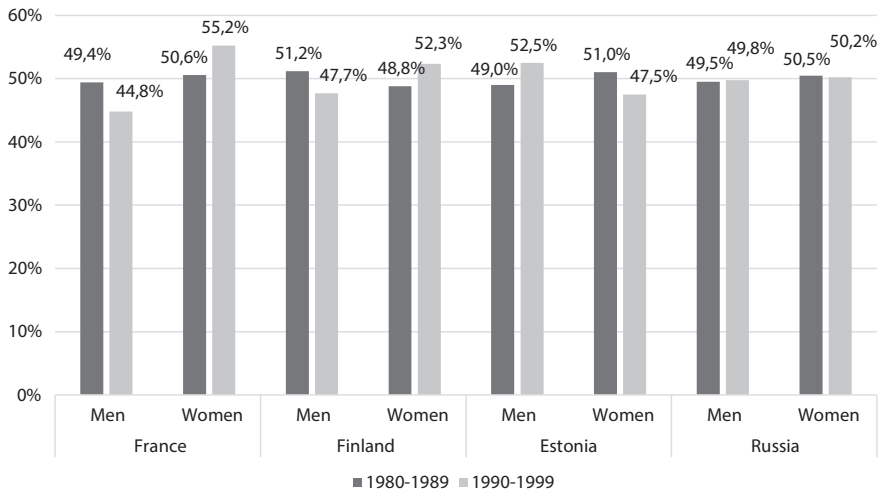


Figure 1. Shares of respondents by countries, genders, and cohorts. *Source:* Authors’ calculations based on two waves of European Social Survey (2006 and 2018)

Methods

We employed a demographic approach to investigate the onset of TA events, focusing on the parameters of structure, timing, and tempo (Winkler-Dworak and Engelhardt 2004; Bon-

gaarts and Feeney 2006; Berrington et al. 2015). The analysis of structure involved assessing the shares of the population that experienced the events of interest, while timing was evaluated through the median ages of event occurrences. To study the tempo, we utilized Cox regression, a method derived from Event History Analysis (EHA) (Mills 2011; Blossfeld et al. 2014). Cox regression enables the examination of the chances of event occurrences, considering the time each respondent spent under the risk of these events occurring.

We specifically selected Cox regressions (Cox 1972) among various EHA methods due to their compatibility with a preset semiparametric regression model. In this study, we focused on analyzing the risks of entering first cohabitation, first marriage, and giving birth for the first time after turning 15. The choice of age 15 was based on our prior research (Mitrofanova 2016, Mitrofanova and Artamonova 2016) and its alignment with the demographers' association of this age with the beginning of the reproductive cycle. We examined temporal patterns of demographic events only, as the structure and timing of socioeconomic events demonstrated similarity among countries.

We opted to use respondents' country and cohort memberships (categorized into 8 groups) as a stratifying variable for Cox regressions. Three variables were chosen as covariates, and the distribution of respondents by their categories is detailed in Appendix 4. Our selection of covariates was justified for several reasons: (1) we had previously employed a similar approach in our earlier studies, ensuring comparability of results; (2) these variables are among the few without missing values, enabling us to calculate risks for all respondents; (3) various model specifications were tested, and this particular one yielded the most robust results.

The set of chosen covariates comprises the following variables, each with its reference group (ref.), and the absence of correlation between covariates is outlined in Appendix 5:

- gender:
 - men (ref.),
 - women;
- place of living at the moment of interview:
 - big cities – more than 100,000 people (ref.),
 - urban area – 20,000 – 100,000 people,
 - rural area – less than 20,000 people;
- level of education:
 - higher – bachelor degree and higher (ref.),
 - professional – vocational training,
 - general – secondary school and lower.

Analysis

Structure

Figure 2 illustrates the proportions of individuals who experienced the starting events marking the transition to adulthood (TA), categorized by countries, genders, and two cohorts of Millennials. Chi-square tests, assessing the significance of observed differences, are provided in Appendix 2.

Across all countries, two distinct clusters of TA markers emerged: socioeconomic events were observed for 50-90% of each cohort in every country, while marriages and childbirth occurred for less than 50% of respondents (with Russian cohorts having the highest shares

of these events). Cohabitation exhibited a fluid position, with Russian shares fluctuating between 50% and 70%, while the other countries consistently showed maximal shares for cohabitations compared to all other TA markers (85% and more).

A notable shift between cohorts is evident, indicating a decline in almost all shares for individuals born in 1990-1999 compared to those born in 1980-1989. Much of this decline can be attributed to age effect (or the censoring of events), as the youngest cohort has not had sufficient time to experience all desired events. Interestingly, amidst the overall decline, cohabitations surprisingly increased for all the youngest cohorts in all countries.

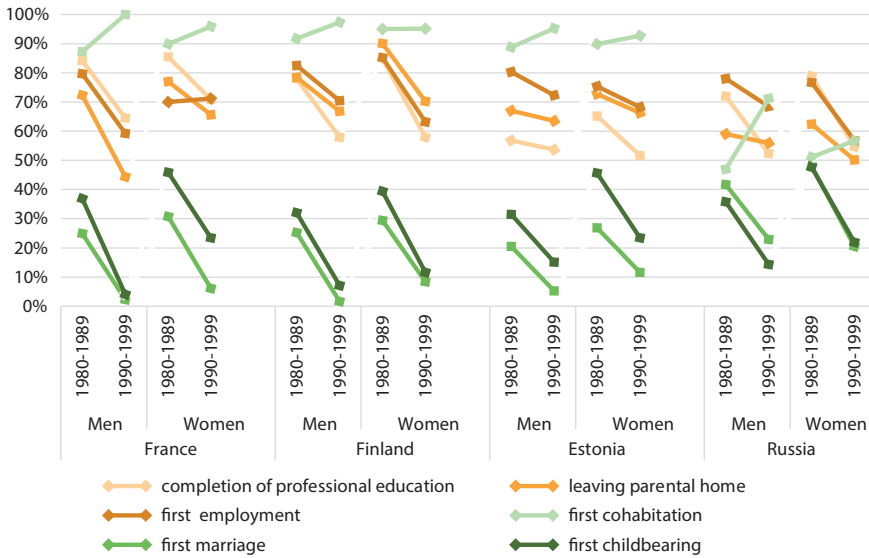


Figure 2. Shares of Millennials obtained starting events by countries, genders and cohorts. *Source:* Authors’ calculations based on two waves of European Social Survey (2006 and 2018)

Timing

Figure 3 presents an infographic calendar of events occurrence based on median ages, offering a measure of central tendency superior to the arithmetic mean or mode. However, it has inherent limitations, especially for young cohorts, as the calendars may be preliminary due to age effect (or the censoring of events). Moreover, these medians do not provide information about the sequence of event occurrence in each respondent’s biography. The ANOVA statistical test for all medians is detailed in Appendix 3. Examining the composition of events in Figure 3 reveals commonalities in the occurrence of socioeconomic events across countries. In France and Finland, this facet of TA typically commences at ages 18-19 for men and 19-20 for women. For men, the first event is typically employment, while for women, it involves a combination of employment and leaving parental home. In Russia and Estonia, the initiation of the socioeconomic part of TA begins at age 19 for both men and women. Estonian men often experience a confluence of all three events, whereas Russian men undergo more dispersed events. Estonian and Russian women typically start with leaving the parental home and then complete this phase of TA within one to two years. The latest age for finishing this part of the transition (age 22) is observed among Finnish men born in 1980-1989.

After the socioeconomic phase of events, the demographic phase unfolds, characterized by a significantly longer duration. This extension is largely attributed to the early onset of first cohabitations, marking the initiation of demographic biographies at quite young ages across all countries. In contrast, marriages and childbirth tend to occur at much later ages, often sequentially, with an interval from several months till one to two years.

Gender differences persist prominently across all cohorts and countries, particularly for demographic events. Notably, in Finland, where governmental support is intensive and more equitable for both genders, event occurrences for men and women appear nearly identical. It's essential to acknowledge, however, the relatively low and preliminary shares of people experiencing marriages and childbirth, especially in the youngest cohort. In all other countries, the well-known difference of one to two years in events occurrence between men and women remains evident.

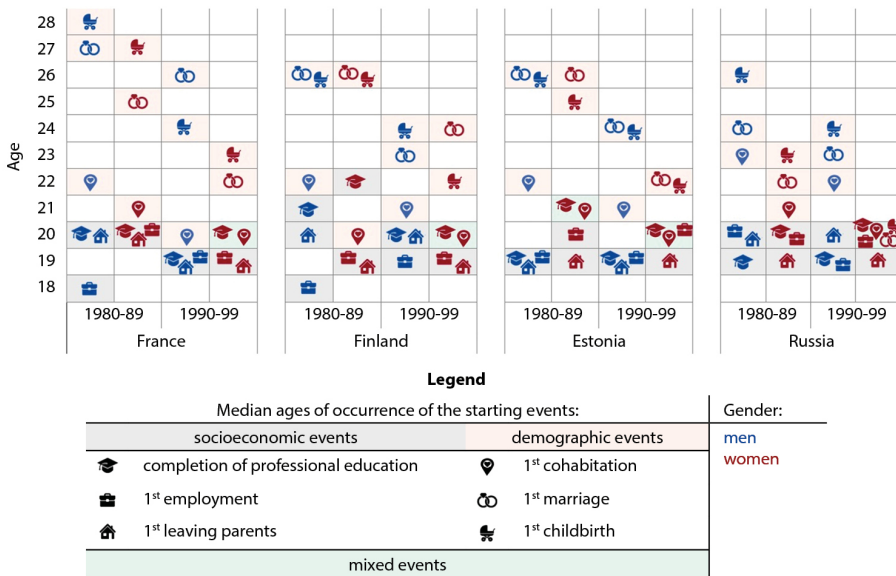


Figure 3. Median ages of the events marking transition to adulthood by countries, genders, and cohorts. *Source:* Authors' calculations based on two waves of European Social Survey (2006 and 2018)

Tempo

We constructed three Cox regression models, each assessing the risks of demographic events occurrence after reaching the age of 15.

All Cox regression models demonstrated significance at the highest level ($p=.000$), enabling meaningful interpretation of the results. Further details on the model quality can be found in Appendix 6. Additionally, all included covariates exhibited significance at the 90% level or higher (Appendix 7-9).

Figure 4 illustrates the risk dynamics of entering the first cohabitation after reaching the age of 15, categorized by countries and cohorts. Approximately five years after their 15th birthday, respondents from all countries commence obtaining cohabitations. The cohort of 1980-1989 in Finland exhibits the highest risks throughout the observation period, while Russians of both cohorts display the lowest risk. Other countries and genders fall between these extremes.

Based on the coefficients of variables in the model (Appendix 7), we find, at the highest level of significance, that women have a 1.4 times higher risk of entering their first cohabitation after reaching the age of 15 compared to men. At the 99% significance level, individuals residing in urban and rural areas have a roughly 1.2 times higher risk of entering their first cohabitation than those from big cities. Similarly, individuals with professional or general education, in comparison with those with higher education, face a 1.2 times higher risk of entering their first cohabitation.

Upon visual analysis of Figure 5, it is evident that Russian cohorts consistently have the highest risk of the first marriage occurrence after the age of 15 throughout the observation period. All other countries fall below, with the lowest risks observed among the youngest representatives of these countries. Based on the table with variable coefficients (Appendix 8), we find, at the highest level of significance, that women have a 1.3 times higher risk of entering their first marriage than men. Individuals living in urban and rural areas face a roughly 1.2 times higher risk of obtaining marriages than those from big cities. Notably, individuals with professional education exhibit almost equal chances of getting married as those with higher education, while individuals with general level of education have a 0.9 times lower chance of entering their first marriage.

Figure 6 depicts the risks of the first childbirth after respondents turn 15. The curves are primarily clustered by the birth years of respondents, with those born in 1980-1989 having the highest chances of procreation. Among this cohort, Russia exhibits the highest risk, followed by Estonia, France, and finally Finland. The youngest cohorts display a similar pattern but with lower chances.

In the table with variable coefficients (Appendix 9), all included variables are significant at the highest level. Women have 1.8 times higher risks of having their first child than men. Individuals living in urban areas face a 1.2 times higher chance of having a new-born than those from big cities. Those in rural areas have a 1.5 times higher risk than people from big cities. Furthermore, individuals with professional and general education have 1.6 and 1.5 times higher risks, respectively, of having their first child compared to those with higher education.

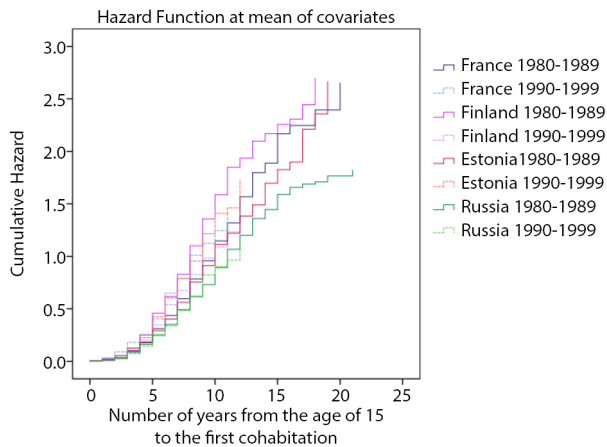


Figure 4. Risks of entering the first cohabitation after reaching the age of 15. *Source:* Authors' calculations based on two waves of European Social Survey (2006 and 2018)

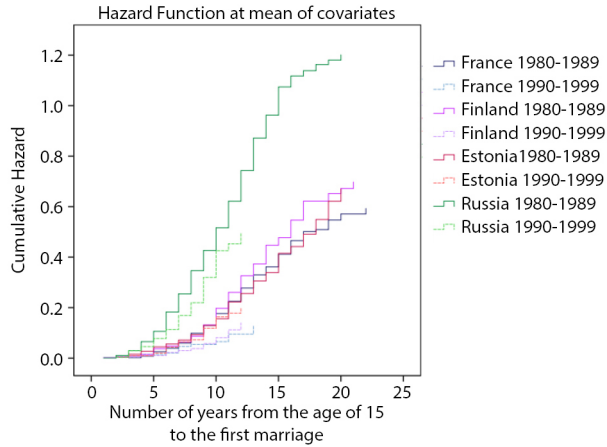


Figure 5. Risks of entering the first marriage after reaching the age of 15. *Source:* Authors' calculations based on two waves of European Social Survey (2006 and 2018)

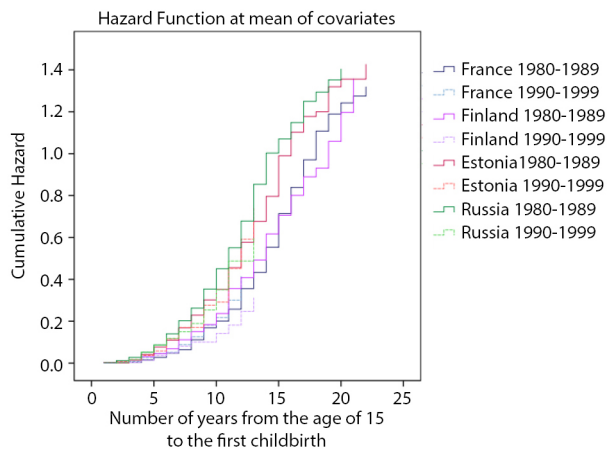


Figure 6. Risks of giving the first birth after reaching the age of 15. *Source:* Authors' calculations based on two waves of European Social Survey (2006 and 2018)

Results and discussion

We validated all hypotheses and uncovered the following key findings:

H1. Transition to adulthood (TA) of Millennials among chosen countries:

H1.1. Socioeconomic events: These events generally exhibit a similar structure and timing across all four countries, with widespread occurrence (50-90% of Millennials) at around ages 18-20. Notably, events in France and Finland are more protracted, while in Estonia and Russia, they tend to be more clustered.

H1.2. Demographic events: Marriages and childbirth are observed in less than 50% of respondents, with Russian cohorts demonstrating the highest shares, and Finland having less than 10% of the young cohort obtaining these events. Cohabitations are more widespread than marriages in all countries (85% or more of respondents experienced it), except in Russia, where only 50–70% entered cohabitation. Across all countries, cohabitation is the first demographic event, while childbirth is almost always the last. Russia has the youngest ages and the highest risks of marriages and childbirth, while Finland and France exhibit older ages and lower risks. Estonia falls in between.

H2. Intragenerational patterns of TA of Millennials:

H2.1. The younger cohort (1990–1999): This cohort experiences fewer TA events and at younger ages compared to the older cohort (1980–1989). This discrepancy is partially attributed to age effect (or the censoring of events), with cohabitation being the only event more widespread among the younger cohort than the older one.

H2.2. Women in all countries except Finland experience the onset of demographic events one-two years earlier than men, while the onset of socioeconomic events turns to be more gender equal as well as the shares of respondents experienced all the TA events.

Our analysis indicates that the occurrence of starting events in TA is not identical across the four selected countries. However, we observe some resemblance and a trend towards a general model of TA. Comparing Millennials with individuals born between 1930 and 1979 from our previous studies (Mitrofanova 2017, 2023), a clear shift is evident. This shift involves the postponement of demographic events, an increase in the total time spent TA, a separation of matrimonial and reproductive behaviors, and a move towards more similar gender trajectories. Among the Millennials we examined, the most noticeable postponement of first marriages and childbearing is observed in French men from the 1980–1989 cohort, resulting in the longest TA. Given France's historical role as a pioneer in demographic modernization, its leadership in the "aging" of timing for demographic events occurrence is not surprising.

The separation of matrimonial and reproductive behaviours is evident in all four countries, albeit with varying pace and patterns. Typically, respondents initiate their demographic biography with cohabitation, followed by entry into the first marriage several years later, and the birth of their first child one to two years after that. Notably, certain cohorts, such as French men in the 1990s, Finnish women in the 1990s, and Estonian women in the 1980s, exhibit younger median ages for childbearing than for marriages, indicating that some individuals have their first children outside of wedlock. While previous studies and Second Demographic Transition (SDT) assumptions anticipate an increase in extramarital births in modern societies, this is not universally observed among Millennials.

The Finnish cohorts display the most similar gender trajectories, likely influenced by wide and egalitarian demographic policies. In contrast, in Russia and Estonia, especially among Russian women, there is a tendency to expedite the completion of life course events. Notably, Russian women experience a simultaneous clash of various adult events by the same age, a phenomenon not observed in other countries. It is crucial to acknowledge that the life courses of Millennials, particularly the youngest cohort, remain incomplete due to their young age at the time of surveys. Despite this, the observed clash of events is particularly pronounced among Russian women, shedding light on potential societal pressures influencing women to have children at the most "reproductively healthy" ages. This pressure creates a domino effect, compelling women to expedite other life events while not yet burdened by maternal responsibilities.

Conclusions

Utilizing data from the European Social Survey in 2006 (3rd wave) and 2018 (9th wave), our analysis focused on the transition to adulthood (TA) of two Millennial cohorts across four countries: France, Finland, Estonia, and Russia. Despite some limitations related to age effect (or censoring), a meaningful comparison was achieved by examining the same cohorts in different countries.

France and Finland display the most modernized patterns of TA, characterized as Western according to Hajnal (1965) and “late, protracted, and complex” according to Billari and Liefbroer (2010). In contrast, Estonia and particularly Russia tend toward the Eastern model, exhibiting relatively more “early, contracted, and simple” patterns of TA, especially in the demographic sphere. Estonia’s modernization outpaces Russia but still positions it as an intermediate between symbolic East and West, aligning with our prior research based on a different dataset (Mitrofanova 2017, 2023).

The shifts in the occurrence of starting events indicate that, despite varying speeds, there is a consistent trend in the transformations of Millennials’ behaviors. This prompts us to delve into the central question of whether countries are moving toward convergence or diverging paths. Notably, we observe a protracted convergence among France, Finland, Estonia, and Russia. These diverse populations undergo roughly similar quantitative and qualitative changes in their sociodemographic behaviors, albeit within different timeframes and with some local nuances. This observation aligns with the documented evidence of a protracted convergence in demographic behaviors, which are integral to the transition to adulthood (Puur et al. 2012a, 2012b).

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Appendices

Appendix 1. Absolute numbers of respondents: by countries, genders, and cohorts

Countries	Genders	Cohorts		Total
		1980-1989	1990-1999	
France	Men	250	103	353
	Women	256	127	383
	Total	506	230	736
Finland	Men	255	123	378
	Women	243	135	378
	Total	498	258	756
Estonia	Men	267	137	404
	Women	278	124	402
	Total	545	261	806
Russia	Men	447	224	671
	Women	456	226	682
	Total	903	450	1353
Total	Men	1219	587	1806
	Women	1233	612	1845
	Total	2452	1199	3651

Source: Authors' calculations based on two waves of European Social Survey (2006 and 2018)

Appendix 2. Pearson Chi-Square Tests for the facts of events occurrence

Facts of events	France		Finland		Estonia		Russia	
	Men	Women	Men	Women	Men	Women	Men	Women
completion of professional education	18.318 1 .000*	7.391 1 .007*	23.804 1 .000*	41.962 1 .000*	.627 1 .428	7.173 1 .007*	14.568 1 .000*	17.877 1 .000*
1 st employment	18.721 1 .000*	.002 1 .967	6.992 1 .008*	27.632 1 .000*	3.284 1 .070	2.342 1 .126	3.485 1 .062	12.937 1 .000*
leaving parents	9.944 1 .002*	5.121 1 .024*	5.687 1 .017*	30.355 1 .000*	.551 1 .458	2.131 1 .144	.907 1 .341	2.073 1 .150
1 st cohabitation	4.686 1 .030 ^b	1.188 1 .276	1.767 1 .184 ^b	.002 1 .966 ^b	1.955 1 .162	.372 1 .542	18.656 1 .000*	3.068 1 .080
1 st marriage	23.261 1 .000*	27.822 1 .000*	30.367 1 .000*	24.067 1 .000*	18.492 1 .000*	14.671 1 .000*	32.387 1 .000*	47.386 1 .000*
1 st childbirth	36.971 1 .000*	17.585 1 .000*	28.055 1 .000*	32.939 1 .000*	15.131 1 .000*	24.057 1 .000*	45.587 1 .000*	44.121 1 .000*

Results are based on nonempty rows and columns in each innermost subtable.

*. The Chi-square statistic is significant at the .05 level.

b. More than 20% of cells in this subtable have expected cell counts less than 5. Chi-square results may be invalid.

Source: Authors' calculations based on two waves of European Social Survey (2006 and 2018)

Appendix 3. ANOVA statistical test for ages of events occurrence

		Variables	Sum of Squares	df	Mean Square	F	Sig.
completion of professional education - age * Country	Between Groups	(Combined)	323.445	3	107.815	14.910	.000
		Linearity	193.782	1	193.782	26.799	.000
		Deviation from Linearity	129.663	2	64.832	8.966	.000
	Within Groups		67463.384	9330	7.231		
	Total		67786.828	9333			
1 st employment - age * Country	Between Groups	(Combined)	182.991	3	60.997	7.168	.000
		Linearity	27.603	1	27.603	3.244	.072
		Deviation from Linearity	155.388	2	77.694	9.130	.000
	Within Groups		57650.748	6774	8.510		
	Total		57833.739	6777			
leaving parents - age * Country	Between Groups	(Combined)	361.387	3	120.462	9.335	.000
		Linearity	323.303	1	323.303	25.054	.000
		Deviation from Linearity	38.085	2	19.042	1.476	.229
	Within Groups		73706.386	5712	12.904		
	Total		74067.774	5715			
1 st cohabitation - age * Country	Between Groups	(Combined)	254.423	3	84.808	6.694	.000
		Linearity	221.005	1	221.005	17.445	.000
		Deviation from Linearity	33.418	2	16.709	1.319	.268
	Within Groups		61363.993	4844	12.669		
	Total		61618.416	4847			
1 st marriage - age * Country	Between Groups	(Combined)	2786.387	3	928.796	70.211	.000
		Linearity	2306.684	1	2306.684	174.371	.000
		Deviation from Linearity	479.703	2	239.851	18.131	.000
	Within Groups		39836.941	3011	13.229		
	Total		42623.328	3014			
1 st childbirth - age * Country	Between Groups	(Combined)	3128.927	3	1042.976	68.251	.000
		Linearity	2209.593	1	2209.593	144.593	.000
		Deviation from Linearity	919.333	2	459.667	30.080	.000
	Within Groups		47439.872	3104	15.281		
	Total		50568.799	3107			

Source: Authors' calculations based on two waves of European Social Survey (2006 and 2018)

Appendix 4. The distribution of categories of covariates of the Cox regression models

Variables	Countries											
	France			Finland			Estonia			Russia		
	1980-1989	1990-1999	1980-1989	1990-1999	1980-1989	1990-1999	1980-1989	1990-1999	1980-1989	1990-1999	1980-1989	1990-1999
Gender	49.4%	44.8%	51.2%	47.7%	49.0%	52.5%	49.5%	49.8%	49.8%	49.8%	49.8%	49.8%
	50.6%	55.2%	48.8%	52.3%	51.0%	47.5%	50.5%	50.2%	50.2%	50.2%	50.2%	50.2%
Place of living at the moment of interview	33.6%	40.4%	44.4%	45.0%	44.8%	41.8%	47.5%	42.2%	42.2%	42.2%	42.2%	42.2%
	36.2%	34.8%	31.3%	32.9%	33.6%	31.8%	35.7%	36.7%	36.7%	36.7%	36.7%	36.7%
	30.2%	24.8%	24.3%	22.1%	21.7%	26.4%	16.8%	21.1%	21.1%	21.1%	21.1%	21.1%
Level of education	32.4%	24.8%	36.5%	29.1%	34.9%	33.7%	33.1%	30.9%	30.9%	30.9%	30.9%	30.9%
	55.5%	48.7%	48.8%	29.8%	30.1%	22.2%	42.3%	29.6%	29.6%	29.6%	29.6%	29.6%
	12.1%	26.5%	14.7%	41.1%	35.0%	44.1%	24.6%	39.6%	39.6%	39.6%	39.6%	39.6%

Source: Authors' calculations based on two waves of European Social Survey (2006 and 2018)

Appendix 5. Correlation analysis for the covariates of the Cox regression models

	Correlations		Place of living at the moment of interview	Gender	Level of education
Kendall's tau_b	Place of living at the moment of interview	Correlation Coefficient	1.000	-.010**	.154**
		Sig. (2-tailed)	.	.002	.000
		N	91507	91421	76100
	Gender	Correlation Coefficient	-.010**	1.000	.013**
		Sig. (2-tailed)	.002	.	.000
		N	91421	91595	76140
	Level of edu- cation	Correlation Coefficient	.154**	.013**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	76100	76140	76159
Spearman's rho	Place of living at the moment of interview	Correlation Coefficient	1.000	-.010**	.172**
		Sig. (2-tailed)	.	.002	.000
		N	91507	91421	76100
	Gender	Correlation Coefficient	-.010**	1.000	.014**
		Sig. (2-tailed)	.002	.	.000
		N	91421	91595	76140
	Level of edu- cation	Correlation Coefficient	.172**	.014**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	76100	76140	76159

** Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' calculations based on two waves of European Social Survey (2006 and 2018)

Appendix 6. Significance and quality of the Cox regression models

Models	-2 Log Likelihood	Chi-square	df	Sig.
1 st cohabitation	22592.311	82.485	5	.000
1 st marriage	11034.537	24.035	5	.000
1 st childbirth	13392.544	198.870	5	.000

Source: Authors' calculations based on two waves of European Social Survey (2006 and 2018)

Appendix 7. Variables in the Cox regression model for entering the first cohabitation after reaching the age of 15

Variables	B	SE	Wald	df	Sig.	Exp(B)
Gender (ref. men)	.343	.045	58.921	1	.000	1.409
Place of living at the moment of interview (ref. big cities)			10.741	2	.005	
- urban area	.135	.051	7.067	1	.008	1.145
- rural area	.164	.058	8.060	1	.005	1.178
Level of education (ref. higher)			15.090	2	.001	
- professional	.188	.050	14.295	1	.000	1.206
- general	.154	.066	5.481	1	.019	1.167

Source: Authors' calculations based on two waves of European Social Survey (2006 and 2018)

Appendix 8. Variables in the Cox regression model for entering the first marriage after reaching the age of 15

Variables	B	SE	Wald	df	Sig.	Exp(B)
Gender (ref. men)	.226	.065	12.180	1	.000	1.254
Place of living at the moment of interview (ref. big cities)			6.763	2	.034	
- urban area	.110	.075	2.124	1	.145	1.116
- rural area	.216	.084	6.610	1	.010	1.241
Level of education (ref. higher)			4.633	2	.099	
- professional	.074	.071	1.090	1	.296	1.077
- general	-.139	.101	1.871	1	.171	.871

Source: Authors' calculations based on two waves of European Social Survey (2006 and 2018)

Appendix 9. Variables in the Cox regression model for giving the first birth after reaching the age of 15

Variables	B	SE	Wald	df	Sig.	Exp(B)
Gender (ref. men)	.584	.059	99.128	1	.000	1.794
Place of living at the moment of interview (ref. big cities)			34.622	2	.000	
- urban area	.181	.068	7.073	1	.008	1.199
- rural area	.429	.073	34.616	1	.000	1.536
Level of education (ref. higher)			57.209	2	.000	
- professional	.485	.065	55.502	1	.000	1.625
- general	.386	.087	19.754	1	.000	1.472

Source: Authors' calculations based on two waves of European Social Survey (2006 and 2018).

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