

Economic fortunes, ethnic divides, and marriage and fertility in Central Asia: Kazakhstan and Kyrgyzstan compared

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Abstract Declining marriage and fertility rates following the collapse of state socialism have been the subject of numerous studies in Central and Eastern Europe. More recent literature has focused on marriage and fertility dynamics in the period of post-crisis political stabilization and economic growth. However, relatively little research on marriage and fertility has dealt with the Central Asian part of the post-socialist world. We use survey and published data from Kazakhstan and Kyrgyzstan, two multiethnic countries with differing paths of post-crisis recovery, to examine overall and ethnic-specific trends in entry into marriage and fertility. We find that in both countries rates of entry into marriage continued to decline throughout post-crisis years. By contrast, fertility rose, and this rise was greater in the more prosperous Kazakhstan. However, we also detect considerable ethnic variations in fertility trends which we situate within the ethnopolitical and ethnodemographic contexts of both countries.

Keywords Fertility · Marriage · Ethnicity · Central Asia · Kyrgyzstan · Kazakhstan

Introduction

The dissolution of the USSR in 1991 led to a dramatic decline in economic outputs and living standards throughout the post-Soviet world, including Central Asia.

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The deep economic crisis of the early post-Soviet years was accompanied by a no less dramatic drop in fertility. After the early post-Soviet period, the political situation in most former Soviet republics gradually stabilized and economic growth resumed. However, the economic recovery differed in scale in different parts of Central Asia. Specifically, while Kazakhstan, richly endowed with natural resources, has experienced vigorous economic expansion and a commensurate rise in personal incomes, Kyrgyzstan, its poorer neighbour to the south, has seen a much more modest rate of development, which has been further impaired by bouts of political instability. As a result, by the end of the past decade, Kazakhstan's annual gross national income per capita shot up above 10,000 in purchasing power parity-adjusted (PPP) US dollars while Kyrgyzstan's PPP-adjusted GNI barely reached one-fifth of that level (see Fig. 1).

The objective of this study is to examine how these divergent economic fortunes may have affected union formation and fertility in the two populations and in their ethnic segments between the end of the 1990s and the first half of the 2000s. Both Kazakhstan and Kyrgyzstan are multiethnic countries. The titular groups in both countries, Kazakhs and Kyrgyz, belong to the same Turkic ethnocultural stock and have similar long-term patterns of family formation and fertility. Both countries have sizable minorities with European roots, mainly ethnic Russian, who settled in Central Asia through decades of voluntary and forced migration during the Tsarist and then Soviet rule. Russians and other Europeans historically have been more advanced on the path of the demographic transition, especially with respect to fertility, than their native neighbours (Blum 1987; Bondarskaya and Darsky 1988). Despite a considerable decline in the absolute and relative size of the European-origin population in the post-Soviet era due to massive migration and low fertility, it has retained a large presence in both countries, particularly in Kazakhstan. The ethnocultural similarity of the two countries sets them apart from the rest of Central Asia (Tajikistan, Turkmenistan, and Uzbekistan), where the titular groups are distinct from Kazakhs and Kyrgyz and where the share of the European-origin

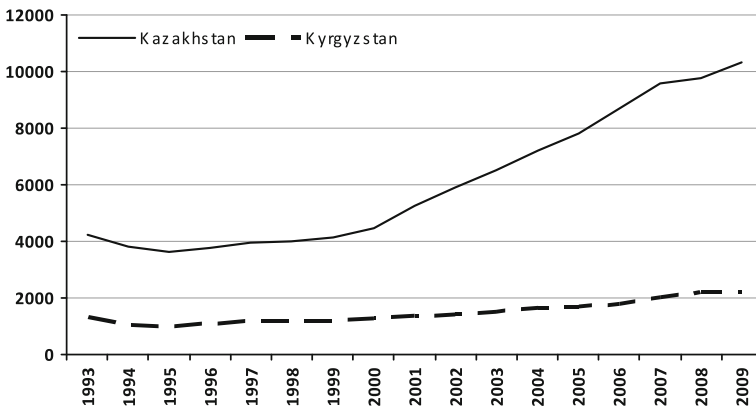


Fig. 1 GNI per capita, PPP (current international \$), Kazakhstan and Kyrgyzstan. Source World Bank, International Comparison Program database, <http://databank.worldbank.org>

population is negligible. At the same time, Kyrgyzstan, unlike its northern neighbour, has a sizable Uzbek ethnic minority which is concentrated in the southern part of the country. Like Kazakhs or Kyrgyz, Uzbeks are also a Muslim Turkic people, with a similar demographic history, but they share with Europeans the status of a non-titular minority in Kyrgyzstan.

Conceptual framework

In Western societies, the inverse relationship between macro-economic performance and marriage and fertility rates in the first demographic transition has been widely documented (see Prioux 2003; Sobotka et al. 2011). The literature on the demographic effects of the dismantling of the socialist socio-economic and political system in Eastern Europe and Central Eurasia documented declines in marriage rates and fertility, although there has been a debate about the role that economic hardships and uncertainties played in those declines (Conrad et al. 1996; Frejka 2008; Gerber and Berman 2010; Hoem et al. 2009; Kharkova and Avdeev 2000; Kohler and Kohler 2002; Kostowska et al. 2008; Perelli-Harris 2005; Philipov and Jasilioniene 2008; Zakharov and Ivanova 1996). The period of post-crisis economic recovery and growth in the region was paralleled by a stabilization of marriage rates and some increase in fertility, largely compensating for earlier postponement, although the region has also seen considerable cross-country diversity (Bongaarts and Sobotka 2012; Goldstein et al. 2009; Hoem et al. 2009; Sobotka 2003, 2008). It has been also observed that recent marriage and fertility trends in Central and Eastern Europe no longer go hand-in-hand: a rise in fertility rates may occur in the absence of any increase in marriage rates (Sobotka and Toulemon 2008).

Comparable evidence from post-Soviet Central Asia is much scarcer. Studies have documented a considerable drop in marriage rates after an initial rise in some Central Asian countries (Clifford 2009; Dommaraju and Agadjanian 2008). Clifford et al. (2010) showed decreases in marriage and fertility rates in Tajikistan, linking these trends to the political instability and food shortages after the collapse of the Soviet Union. Agadjanian (1999) and Agadjanian et al. (2008) examined fertility declines in early post-Soviet Kazakhstan. Spoorenberg (2013) recently documented parity-specific fertility decline in selected Central Asian countries in response to the economic crisis of the late Soviet and early post-Soviet periods, as well as an upturn in fertility starting in the early 2000s. In a study of Mongolia, which was not part of the Soviet Union but shared many socio-economic and cultural features with Central Asian Soviet Republics, Spoorenberg (2009) analysed the dramatic fertility reduction that accompanied that country's transition to the market economy.

Studies of within-country variations in marriage and fertility in post-socialist settings have focused mainly on socio-economic characteristics, such as education and employment (e.g., Billingsley 2011; Perelli-Harris 2008). These variations result either from different positioning of the subgroups in question vis-à-vis transitional economic shocks or from long-term secular processes. In either case, educational or employment differentials are not politically motivated as they are not produced by political action that targets or disproportionately affects some

educational or employment subgroups but not others. In contrast, ethnic differentials, even those with deep historico-cultural roots, may often be influenced by state policies that explicitly or implicitly privilege some ethnic groups and disadvantage others. However, most of the recent literature deals with either mono-ethnic countries or countries where ethnic-specific registration statistics are not available or the shares of the ethnic minority population are too small for sound analysis of ethnic differences using sample survey data (e.g., Billingsley 2011; Sobotka 2008; Zakharov 2008).

In comparison, many nations that emerged from the rubble of the USSR, including those in Central Asia, are characterized by considerable ethnic diversity. Whereas during most of the Soviet rule ethnic tensions and rivalries were tightly controlled by the state, the waning years of the Soviet rule and the subsequent independence of Central Asian nations have seen a rise of nationalism both at the popular and political level. Specifically, the titular ethnic groups, such as Kazakhs in Kazakhstan and Kyrgyz in Kyrgyzstan, have been gaining in political and cultural prominence, while the once-privileged ethnic Russians and other Russian-speaking Europeans have been rapidly losing their former political and cultural clout and other native groups, such as Uzbeks in Kyrgyzstan, have become further marginalized (Agadjanian 1999; Agadjanian and Makarova 2003; Davis and Sabol 1998; Tishkov 1997).

Although ethnic cleansing and other forms of direct state-organized or sponsored ethnic violence have been rare, nativist tendencies have been fairly common in most, if not all, post-Soviet states, including Central Asia (e.g., Kosmarskaya 2006; Sarsembayev 1999). Officially, nativist ethnic and linguistic rhetoric and policies have been aimed at undoing historical injustices suffered by native, and especially titular, ethnic groups during the Soviet and even pre-Soviet times. However, the rhetoric and policies have also been used by the ruling elites to consolidate their political power. And because the state has retained a considerable role as a provider of employment and a guarantor of economic welfare, nativist policies have brought tangible benefits to the titular groups or, at the very least, have created expectations of such benefits among their members. The existing data do not allow for an assessment of changes in ethnic-specific economic indicators: this information has never been published by national statistical agencies. Our argument, however, rests not on ethnic differences in income or other measures of economic status but rather on changes in perceived social and economic opportunities among ethnic groups, and in particular between the titular and non-titular nationalities, after the countries' independence.

This analysis extends the previous work on ethnic-specific union formation and fertility dynamics in Central Asia in the earlier post-Soviet period which detected considerable ethnic variations in union and fertility timing and in parity that can be traced to the ethnic groups' experiences of the demographic transition as well as their sociopolitical positioning in post-Soviet societies (e.g., Agadjanian and Makarova 2003; Agadjanian et al. 2008; Agadjanian and Dommaraju 2011). Thus, in an earlier study of ethnic-specific trends in fertility in Kazakhstan in the last decade of twentieth century, Agadjanian et al. (2008) showed significant ethnic differences in fertility behaviour. Previous studies have also documented ethnic

differences in patterns and timing of union formation in Kazakhstan (Dommaraju and Agadjanian 2008) and Kyrgyzstan (Agadjanian and Dommaraju 2011). The present study builds on these analyses and seeks to link ethnic-specific trends in entry into first marriage and in fertility in Kazakhstan and Kyrgyzstan to the economic recovery and growth that characterized the two countries during much of the first decade of the current century.

The reviewed evidence on marriage and fertility trends in Eastern Europe and Eurasia in the past two decades and our conceptualization of ethnic-specific demographic trajectories and socio-political vulnerabilities lead to the following two hypotheses. First, in line with much of the literature on other transitional settings, we expect that economic recovery will be associated with a demographic recovery: both fertility rates and rates of entry into first marriage should increase with rising incomes after a crisis-era slump, and a more vigorous economic growth in Kazakhstan should trigger a more robust recovery of fertility and marriage rates in that country than in Kyrgyzstan. Following the literature, however, we also anticipate that a rise in fertility would be more pronounced than any increase in rates of entry into marriage. And second, because we assume that the economic recovery has benefited the titular groups most, either in tangible terms or in terms of enhanced optimism, the marriage and fertility rebound should also be concentrated among these groups.

Data and methods

Our data come mainly from the Kazakhstan and Kyrgyzstan Multiple Indicators Cluster Surveys (KazMICS and KyrMICS) conducted in 2006 and 2005–2006, respectively. We use primarily the women's files: women aged 18–49, $N = 14,710$ in KazMICS and $N = 6,973$ in KyrMICS. While the data collected by the two surveys are unique for the two countries, they have limitations that constrain our analysis. First, neither MICS questionnaire differentiated between entry into formal marriage and informal union. Although cohabitation has not been nearly as common in Kazakhstan and Kyrgyzstan as in Western settings, the differences in the risk of entry into each of the two forms of union may be non-trivial, especially across ethnic groups (see Agadjanian and Dommaraju 2011; Denisenko and Kalmykova 2011). Here we use the terms 'marriage' and 'marital union' for both types of unions. Second, neither survey collected complete birth histories: only the years of the first and the last births and the total number of births are available. We therefore are unable to estimate birth probabilities over the entire reproductive span. A third limitation is that ethnicity ('nationality' in local parlance) and native language were only asked in the household questionnaire and only for the household head in KazMICS; in KyrMICS, only the question on household head's native language was included. We therefore use household head's language as a proxy for ethnicity of the woman interviewed in that household. Table 1 presents the breakdown of the two samples by household head's native language. We use the term 'ethnicity' for the sake of brevity.

Table 1 Language of household head in MICS samples

KazMICS 2006		KyrMICS 2005–2006	
Language	%	Language	%
Kazakh	49	Kyrgyz	61
Russian	35	Russian	13
Other	16	Uzbek	20
		Other	6

We start by examining ethnic-specific trends in probabilities of transition to first marital union during the post-Soviet era and relate them to trends in macro-economic performance. The probabilities of transition to first union are derived from a discrete-time logistic model. A woman is considered at risk of marriage from age fifteen till age at marriage or censored at age at survey if unmarried at the time of survey. We then use the MICS data to illustrate net ethnic differences in fertility with a Poisson regression model predicting the number of children ever born from ethnicity while controlling for other potentially confounding factors. We then compare trends in published total fertility rates (TFRs) for the entire population and in ethnic-specific TFRs computed from KazMICS, KyrMICS, and the Demographic and Health Surveys (DHS) conducted in the 1990s: in 1995 and 1999 in Kazakhstan and in 1997 in Kyrgyzstan. TFRs from KazMICS and KyrMICS data are computed using births in the preceding twelve months assuming that no woman had more than one birth during that period. TFRs from DHS are based on births in the three preceding years. In DHS ethnicity is defined using the question on the respondent's nationality.

Results

Entry into first marital union

Figure 2a presents the overall and ethnic-specific trends in annual predicted probabilities of entry into first marital union in Kazakhstan. These probabilities are computed from KazMICS data on the basis of a discrete-time logistic regression model with the ethnicity \times year interaction term and with duration in years since 15th birthday (linear and quadratic) as a control; the outputs of the regression models on which these graphs are based are available from the authors upon request. To smooth out the trends, the presented estimates are three-year moving averages. The graph shows an increase in the probability of entry into marriage around the late 1980s–early 1990s and a steady decline throughout the post-Soviet period. Probabilities of entry into marriage are higher among Russians for all but the end of the observation period, echoing the patterns observed in earlier studies (Agadjanian 1999; Dommaraju and Agadjanian 2008), but the post-Soviet trends are very similar between the two groups. Starting at the end of the 1990s, the decline in the probability of entering a union tends to level off in both groups, and especially so among Kazakhs, resulting in a near-convergence by the early 2000s.

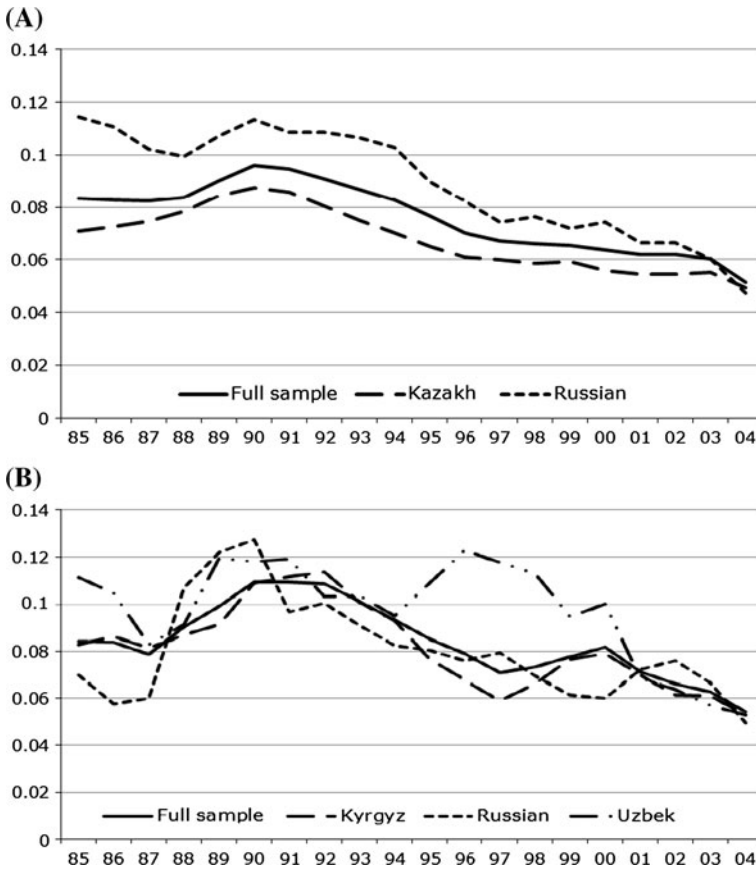


Fig. 2 Predicted probability of entry into first marital union, 3-year moving average. **a** Kazakhstan. **b** Kyrgyzstan. *Source* Estimated by the authors from KazMICS and KyrMICS data

Figure 2b depicts the same trends in predicted probabilities of transition to first marital union for Kyrgyzstan as a whole and for its main ethnic groups: Kyrgyz, Uzbeks, and Russians. Because the size of the Uzbek and Russian subsamples is relatively small, the yearly estimates for these groups are rather unstable. The overall trends, however, seem quite similar to those in Kazakhstan at least to the end of the twentieth century: an increase in probabilities in the late 1980s–early 1990s and a steep decline during most of the 1990s. At the turn of the century there was a minor reversal of the trend (unlike in Kazakhstan, where no such reversal was noticeable), but the slide resumed in the early 2000s. Not surprisingly, ethnic Kyrgyz followed the overall trend most closely, but even among Russians the trend was similar. Uzbeks displayed an anomalous increase in the probability of entry into marriage in the mid-1990s but after that showed a precipitous and inexorable drop. In sum, we see no evidence of a rebound in rates of entry into first marital union. The decline in the probability of entering marriage seemed impervious to the economic recovery in either country and was shared by all ethnic groups.

Fertility

Both Kazakhstan and Kyrgyzstan have considerable variation in fertility between Asian (titular) groups and European-origin groups that predates the post-Soviet crisis (Agadjanian et al. 2008). This variation can be illustrated with ethnic differentials in the number of children ever born. Table 2 presents the results of Poisson regression models that use the KazMICS (Panel A) and KyrMICS (Panel B) to predict the number of children ever born for ever-married women aged 15–49; the models include an offset for duration since first union and control for age at marriage, area of residence, education, and household wealth. Figure 3 depicts the mean number of children ever born for each ethnic group estimated from the regression models; the estimates in the figure should be interpreted in conjunction with the statistical significance of corresponding regression coefficients. As the results show, Russians have much lower fertility than the titular groups in both countries, and especially in Kyrgyzstan, regardless of other characteristics. Interestingly, in Kyrgyzstan, Uzbeks' fertility also appears to be lower than that of the titular group but the difference between Uzbeks and Kyrgyz is not statistically significant.

Whereas the analysis of children ever born provides a fairly robust test of ethnic differences in lifetime fertility, it does not permit assessment of temporal trends. Figure 3 displays trends in TFRs in both countries compiled from available published estimates. The trends echo the changes in the two countries' economic fortunes described above: in both countries, the TFRs declined rather steeply throughout the 1990s but then started to rise as the economic growth picked up, in a similar manner to that observed in Western and Eastern Europe (Bongaarts and Sobotka 2012). It is notable that the TFR has been consistently lower in Kazakhstan than in Kyrgyzstan although the gap becomes narrower toward 2010 as Kazakhstan's fertility rebounded somewhat more strongly than Kyrgyzstan's. In fact, while

Table 2 Children ever born, Poisson regression with an offset for duration since first union, ever married women aged 15–49, KazMICS and KyrMICS (parameter estimates)

Predictor	A. KazMICS 2006	B. KyrMICS 2005-6
Russian	−0.343**	−0.541**
Uzbek	n/a	−0.036
Age at first union	0.001	0.002
Secondary education or less	0.058**	0.067**
Secondary specialized education	−0.043*	n/a
Wealth index-1 (poorest)	0.394**	0.120**
Wealth index-2	0.260**	0.106**
Wealth index-3	0.172**	0.090*
Wealth index-4	0.051*	0.027
Urban residence	−0.041*	−0.117**
Intercept	−2.025**	−1.718**
Number of cases	8,990	4,431

Reference categories: Kazakh for KazMICS (Kyrgyz for KyrMICS), higher education, highest wealth category, rural residence; secondary special education not available in KyrMICS; significance level ⁺ $p < .1$; * $p < .05$; ** $p < .01$

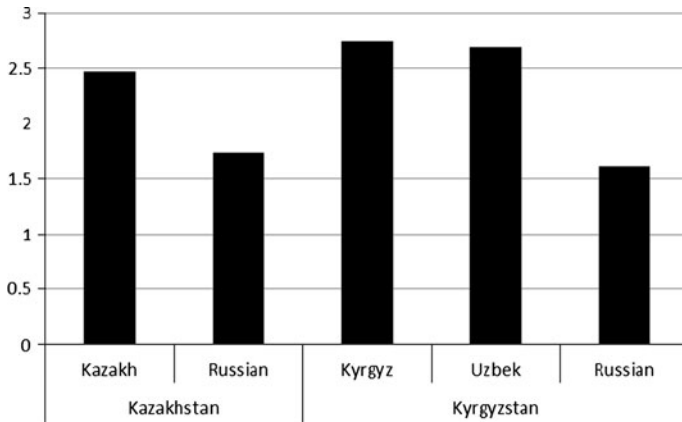


Fig. 3 Predicted number of children ever born, ever married women aged 15–49, KazMICS and KyrMICS

Kyrgyzstan’s TFR was almost one child lower at the end of the first decade of the 2000s than in the late 1980s, Kazakhstan’s estimated TFR for 2009 was just 0.2 lower than the 1989 estimate, even after a substantial rebound since the turn of the century.

Figure 5a juxtaposes TFRs computed from three surveys in Kazakhstan, the 1995 DHS, the 1999 DHS, and KazMICS; and Fig. 5b compares TFR estimates from two surveys in Kyrgyzstan, the 1997 DHS and KyrMICS. These survey estimates for the entire population of Kazakhstan are generally higher than the estimates from official birth registration data on which Fig. 4 is based; for Kyrgyzstan, the survey estimate is higher for DHS but is lower for KyrMICS, compared to the corresponding official data. The difference in TFRs from the two sources is smaller in 2006 than in the 1990s, possibly reflecting better quality of birth registration data. The overall trends, however, are similar in the survey and in the published data.

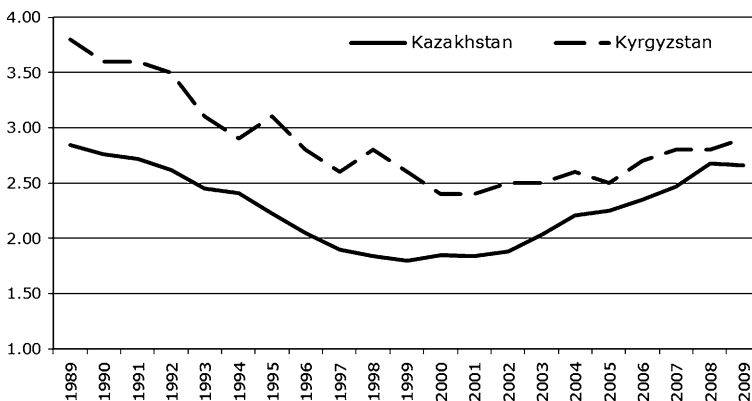


Fig. 4 Trends in total fertility rates in Kazakhstan and Kyrgyzstan. *Source* UNICEF Regional Office for CEECIS TransMONEE 2011 Database

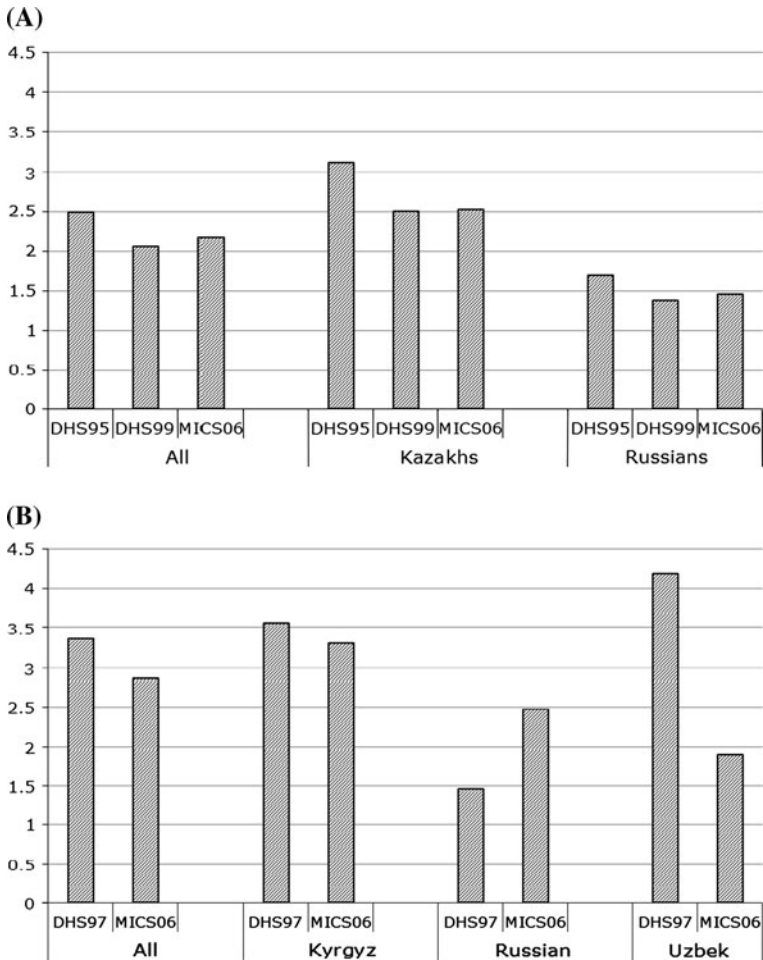


Fig. 5 Overall and ethnic-specific total fertility rates. **a** Kazakhstan. **b** Kyrgyzstan. *Source* Computed by the authors from KazDHS 1995, 1999; KyrDHS 1997; KazMICS 2006; KyrMICS 2005–2006

Figure 5a, which shows ethnic-specific TFRs computed from the Kazakhstan DHS and KazMICS, confirms stark ethnic differences in fertility between Kazakhs and Russians. One interesting observation that can be made from Fig. 5a is that fertility in each of the two ethnic groups declined sharply between the 1995 and 1999 DHS but stabilized and even slightly rebounded by the middle of the decade. In fact, a rebound was somewhat more palpable among Russians (from 1.38 to 1.46 children per woman) than among Kazakhs (2.50–2.52).

In Kyrgyzstan (Fig. 5b), both the overall and ethnic-specific trends appear somewhat different from those in Kazakhstan. It should be noted that in the second half of the 1990s both ethnic Kyrgyz and especially Kyrgyzstan's Uzbeks had much higher fertility than Kazakhs, whereas the fertility levels of Kazakhstan's and Kyrgyzstan's Russians, more advanced on the path of fertility transition than the

native groups, were comparably low. The overall TFR declined noticeably in Kyrgyzstan between 1997 and 2006, but this decline was concentrated among the titular ethnic group and, especially, among Uzbeks, whose total fertility plunged from 4.19 children per woman, by far the highest in the country in 1997, to 1.89, the lowest of all major ethnic groups by around 2005. In contrast to the two Asian groups, the TFR of Russians shot up from 1.46 in 1997 to 2.47 in 2006. While the trend generally parallels that among Kazakhstan's Russians observed in Fig. 5a, the magnitude of this jump is suspect and may have been influenced by the small sample size; the dramatic drop in Uzbek fertility invites a similar suspicion for the same reason.

Discussion and conclusion

Using available aggregate and survey data we set out to examine whether the different economic and political trajectories following the early post-independence crisis in Kazakhstan and Kyrgyzstan have affected trends in marital union formation in each of these two countries as a whole and in their ethnic subgroups. Our hypothesis regarding marriage rate response to the economic recovery was not confirmed. We found no indication that the post-crisis economic upturn or inter-country differences in the rate of this upturn have affected entry into marriage: in both countries yearly probabilities of entry into first marital union declined steadily after a rise around the time of the Soviet collapse. Notably, this decline characterized all ethnic groups, titular and non-titular, Asian and European-origin, despite their seemingly different demographic past and different stakes in the post-Soviet political and economic order. It should be noted that while there has been no increase in marriage during the economic recovery, the decline in marriage appears to have slowed. Economic conditions are known to affect entry into formal marriage and, concomitantly, the likelihood of informal union formation (Prioux 2003). Moreover, in rapidly changing societies such as post-Soviet Central Asia, one should also be aware of a strong secular trend toward increased non-marital cohabitation. Although, as mentioned earlier, we are unable to distinguish between 'formal' and 'informal' unions with our data, it is likely that the share of the latter has been rising (cf. Denisenko and Kalmykova 2011; Dommaraju and Agadjanian 2008). It is also important to keep in mind that informal unions are more likely to be underreported in surveys than are formal marriages (Hayford and Morgan 2008), which could have affected the observed trends in union formation.

In line with our expectations, total fertility rates in both countries registered an increase starting at about the same time as the economies began to grow; and interestingly, at about the same time as fertility began to rise across Europe (see Bongaarts and Sobotka 2012). As we hypothesized, the rise of fertility appeared stronger in Kazakhstan, where the economic recovery was more vigorous. However, it is important to note that even before the collapse of the Soviet Union, fertility in Kazakhstan was much lower than in Kyrgyzstan (largely, but not entirely, due to a bigger share of Russians and other Europeans in Kazakhstan's population), and the differences persisted into the post-Soviet period as Kazakhstan's fertility plunged

below the replacement level for much of the 1990s, while Kyrgyzstan's TFR, despite a sharp drop in the first half of the 1990s, stayed well above it. By the second half of the first decade of this century, the two countries' TFRs were closer to each other than they had ever been in the past two decades.

The comparison of ethnic-specific TFRs computed from survey data revealed instructive differences across and within the two countries. In Kazakhstan, the titular ethnicity's fertility remained largely stable in the first 5 years of the 2000s. In Kyrgyzstan, for which we had only two points of estimates, compared to Kazakhstan's three, we did not observe any sign of fertility stabilization among the titular group. Even so, ethnic Kyrgyz TFR in Kyrgyzstan remained much higher than that of ethnic Kazakhs in Kazakhstan. Use of data from two and three time points does not allow us to capture any ethnic variations that might have occurred between the survey years. Such an analysis would require continuous data on ethnic-specific TFRs which are not currently available. With the data at hand, we did not find support for the hypothesis that fertility would rebound most strongly among the titular groups: Kazakhs' fertility barely changed as economic recovery was setting in, while Kyrgyz fertility, already much higher than Kazakhs', declined noticeably. The trends among ethnic minorities, however, were quite telling. Russians in Kazakhstan registered a non-negligible increase in TFR as the economic situation in that country improved. The significant rise in TFRs among Russians and the dramatic drop among Uzbeks in Kyrgyzstan are particularly interesting even though the exact values generated by our calculations may not be reliable, owing to the relatively small size of the two ethnic groups in the KyrMICS sample. Yet, assuming that the observed trends do approximate reality with some degree of accuracy, we can speculate about the nature of the difference between the two minority groups. Thus the observed trends in Russian fertility may be due to an increase in second births postponed during the preceding years of economic duress and uncertainty. However, they may also reflect the selective nature of ethnic Russian emigration from the two countries, especially from Kyrgyzstan: the Russians who did not emigrate could be more comfortable with or better adapted to Kyrgyzstan's ethnopolitical and economic reality than their co-ethnics who chose to leave that country. In any case, it should be emphasized that the increase in Russian fertility started from a very low base: Russians' TFR in Kyrgyzstan was probably well below replacement for most of the 1990s. Thus fertility trends among Russians in both countries show more affinity with those in Central and East Europe than with those among the titular groups of their respective nations. And whereas the trends among Russians should be cast within the framework of the second demographic transition, the decline of the Uzbek TFR in Kyrgyzstan should be viewed as part of the first demographic transition precipitated by the deteriorating societal prospects of Kyrgyzstan's Uzbek minority. It seems plausible to suggest that the perception of ethnopolitical insecurity, most common among Central Asia's Russians and other European-origin groups in the early years of independence, has been spreading to Kyrgyzstan's largest ethnic minority, the Uzbeks. Tensions between Kyrgyz and Uzbeks, most vividly manifested in the ethnic clashes in the country's south in the summer of 2010, had been accumulating for years. Generalized and apparently state-sponsored discrimination and fears of ethnic violence may have contributed to the precipitous decline of fertility among Uzbeks.

The limitations of our data do not allow us to connect directly these national and ethnic-specific fertility dynamics with the trends in union formation by examining the relative contribution of births within formal marriages versus those within non-formalized partnerships. Given the growing share of non-marital births in independent Kazakhstan and Kyrgyzstan and ethnic variations in non-marital childbearing (Kan 2012; Nedoluzhko 2011), these connections should be addressed in future research when adequate data become available. The current data limitations also prevent us from engaging directly the recent perspectives on tempo effects in the fertility increase in European countries since around 2000 (Bongaarts and Sobotka 2012; Goldstein et al. 2009). Thus, Bongaarts and Sobotka (2012) argued that the increase in period fertility in Europe in the late 1990s and most of the 2000s was driven largely by a decline in the pace of postponement of childbearing. The recession at the end of the decade caused a reversal of that increase (Sobotka et al. 2011). Though there is no direct similar evidence for the two countries examined in this article, we suggest that changes in postponement of first births were unlikely to have a comparable influence on fertility there. Thus, while in European countries there was a clear trend toward postponement of fertility in the last few decades of the 20th century, in Central Asia progression to first birth was fairly stable until the mid-1990s (Clifford et al. 2010; Spoorenberg 2013). Marriage age and the first birth interval did not change dramatically after the collapse of the Soviet Union either (Agadjanian et al. 2008; Dommaraju and Agadjanian 2008). Thus, changes in timing of first births should not have affected fertility rates in Central Asia to the same extent as they did in Europe. However, whether adjustments in timing of higher-order births have influenced period fertility rates needs closer scrutiny. The new data from the region, as they become available, may enable us to examine these fertility dynamics.

Yet, even with richer and more recent data, parallels between the European and Asian parts of post-communist Eurasia should be drawn with caution. The interpretation of ethnic differences in demographic outcomes in Central Asia requires particular prudence as these differences are rooted not only in the groups' differing access to real or imaginary socio-economic and political resources but also in their unique historico-cultural and demographic baggage (Barbieri et al. 1996; Blum 1987). Considering this complexity and the limitations of the data, our findings shed important light on the demographic dynamics in the least studied part of the post-Soviet world.

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