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. In contrast, fertility appeared to rise, and this rise was greater in the more prosperous Kazakhstan. However, we also detect considerable ethnic variations in fertility trends which we situate in the ethnopolitical and ethnodemographic contexts of both countries.

Introduction

The dissolution of the Soviet Union two decades ago led to a dramatic decline in the economic output and living standards throughout the post-Soviet world, including Central Asia. 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 has differed in scale in different parts of Central Asia. Specifically, while Kazakhstan, richly endowed with oil, natural gas, and other mineral resources, has experienced vigorous economic growth and a commensurate rise in personal incomes, Kyrgyzstan, its poorer neighbor to the south, has seen a much more modest rate of development, which has been further impaired by bouts of political instability.

The main objective of this study is to examine how these divergent economic fortunes may have impacted union formation and fertility in the two countries in the end of the 1990s and the first half of the 2000s. For this comparative analysis we employ data mainly from the Kazakhstan and Kyrgyzstan Multiple Indicators Cluster Surveys, both conducted in 2006. Besides comparing the two countries at the aggregate level, we examine ethnic differences within and across them. Both Kazakhstan and Kyrgyzstan are multiethnic nations, whose populations, in addition to the respective titular ethnic groups (Kazakhs and Kyrgyz), include sizeable minorities both of Asian stock (Uzbeks in Kyrgyzstan) and of European roots (Russians and other European-origin groups in both countries). 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 transitions as well as

sociopolitical positioning in post-Soviet societies (e.g., Agadjanian and Makarova, 2003; Agadjanian et al., 2008). It also draws from the large demographic literature on trends in marriage and fertility following the dismantlement of the socialist socioeconomic and political system in Eastern Europe and Central Eurasia. This literature has documented declines in marriage rates (e.g., Gerber and Berman 2010; Hoem et al., 2009; Philipov and Jasilioniene 2008) and in fertility (e.g., Kohler and Kohler 2002; Kostowska et al., 2008; Perelli-Harris, 2005; Zakharov and Ivanova, 1996) following the collapse of state socialism, 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; Kharkova and Andreev, 2000; Kohler and Kohler, 2002). Marriage and fertility declines in the wake of the dissolution of the Soviet Union have been also observed in Central Asia. Thus Dommaraju and Agadjanian (2008) documented a considerable drop in marriage rates after an initial rise in some Central Asian countries. Clifford et al. (2010) showed decreases in marriage and fertility rates in Tajikistan, linking these trends to the political instability and food shortages in after the collapse of the Soviet Union. Agadjanian (1998) and Agadjanian et al. (2008) examined fertility declines in early post-Soviet Kazakhstan, and Spoorenberg (2009) observed declines in marriage and higher-parity fertility in post-socialist Mongolia.

In contrast to the rich literature on the early post-socialist period, relatively little is known about marriage and fertility response to the economic recovery and sociopolitical stabilization that characterized most of the first decade of this century in the countries that once were part of the Soviet Union. In post-crisis Central and Eastern Europe there is some evidence of stabilization of marriage rates and some increase in fertility, although the region also evinces considerable cross-country diversity (Goldstein et al., 2009; Hoem et al. , 2009; Vishnevsky,

2010; 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). Most of the recent

literature, however, deals with either monoethnic countries or countries where ethnic-specific

registration statistics are not available or the shares of the ethnic minority population are too

small for sound analyses of ethnic differences using sample survey data (e.g., Billingsley, 2011;

Sobotka, 2008; Zakharov, 2008).[1] In particular, recent marriage and fertility trends in multiethnic

nations of Central Asia have not been well examined. This study, focused on Kazakhstan and

Kyrgyzstan, is an attempt to partially fill this gap.

Theoretical framework

Studies of within-country variations in marriage and fertility in post-socialist settings have

focused mainly on socioeconomic 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 post-Soviet economic shocks or from long-term secular

processes. In either case, education or employment differentials are not politically motivated as

they are not produced by political action that target or disproportionately affects some

educational or employment subgroups but not others. In contrast, ethnic differentials, even those

with deep historico-cultural roots, are often influenced by state policies that explicitly or

implicitly privilege some ethnic groups and disadvantage others. Minority-group status, defined

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[1] Studies focusing on East European Gypsies, also known as Roma or Romani, are perhaps among the few
exceptions (Preda, 2010; Ringold, 2000). However, the Roma, long ostracized in most of Eastern and Central
Europe, represent a unique type of ethnic minority that cannot be compared to most ethnic groups constituting multi-
ethnic countries of Eurasia.

on the basis of ethnicity or religion, has been shown to shape demographic outcomes in a variety of settings, as members of minority groups adjust their marital or reproductive behavior to attenuate their collective societal disadvantages or, less frequently, to preserve their advantages (Goldscheider and Uhlenberg, 1969).

While 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). Officially, nativist ethnic and linguistic policies and rhetoric have been aimed at undoing historical injustices suffered by native, and especially titular, ethnic groups during the Soviet and even pre-Soviet times. Yet, these policies and rhetoric 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.

In an earlier analysis of ethnic-specific trends in fertility in Kazakhstan in the last decade of the past century, Agadjanian et al. (2008) showed significant ethnic differences in fertility behavior. Ethnic differences in patterns and timing of union formation have been documented in Kazakhstan (Dommaraju and Agadjanian, 2008) and Kyrgyzstan (Agadjanian and Dommaraju, 2011). The present study builds on these analyses and attempts 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. It compares Kazakhstan with Kyrgyzstan for several reasons. First, while both countries saw macroeconomic improvements since the end of the 1990s, these improvements were much more pronounced in oil- and natural-gas rich Kazakhstan than in its much poorer neighbor to the

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South. Second, 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. Third, both countries have sizeable minorities of European roots, mainly ethnic Russian, who settled in Central Asia through decades of 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 neighbors (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. Finally, unlike its northern neighbor, Kyrgyzstan has a sizeable 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, which may lead to similar perceptions of being discriminated against and pessimism about the future.

The evidence from research on marriage and fertility trends in Eastern Europe and Russia in the past two decades and our conceptualization of minority-group vulnerabilities produce the following two hypotheses. First, in line with the literature on Eastern Europe and Russia, 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 Kazakhstan should trigger a more robust recovery of fertility and marriage rates in that country compared to 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

benefitted 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 Method

Data

Although our analysis draws on a variety of data sources, our main data come from the latest available Kazakhstan and Kyrgyzstan Multiple Indicators Cluster Surveys (KazMICS and KyrMICS), both conducted in 2006. 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. Three main limitations of the data must be acknowledged. First, as is standard in MICS and similar surveys, such as DHS, neither MICS questionnaire differentiated between entry into formal marriage and informal union (the corresponding question reads: "What month and year did you marry or started living in union for the first time?"). Although non-formalized cohabitation has not been nearly as common in Kazakhstan and Kyrgyzstan as in western settings, the differences in the risk of entry in each of the two forms of union may be non-trivial, especially across ethnic groups (see Agadjanian and Dommaraju, 2011). In the text below, we use the terms "marriage" and "marital union" for both formal marriages and informal unions.

Second, neither survey collected complete birth histories: only the years of the first and the last births are available. We therefore are unable to carry out a dynamic analysis of probabilities of birth over the entire reproductive span. Also, our calculation of the total fertility rates in the 12 months preceding the survey assumes that no woman had more than one live birth during that period.

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The 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 and 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. In the text below, we use the term "ethnicity" for the sake of shortness.

Table 1 about here

In addition to KazMICS and KyrMICS data, we use estimates of total fertility rates (TFRs)[2] derived from birth registration statistics in both countries. Vital statistics in Central Asia may not be of very high quality, but there are no reasons to expect substantial variation in their quality over time. Ethnic-specific TFRs are not available from government sources in either country. To establish trends in ethnic-specific TFRs we compare the TFRs that we computed from MICS with those computed from the Demographic and Health Surveys (DHS) conducted in the 1990s: in 1995 and 1997 in Kazakhstan and in 1997 in Kyrgyzstan. Finally, we use published estimates of economic growth of Kazakhstan and Kyrgyzstan in the post-Soviet period to illustrate trends in economic performance in both nations. It should be noted that the aggregate indicators conceal disparities in the distribution of income across population subgroups, including ethnic groups. However, we should remind that macroeconomic trends affect marital and reproductive behavior through ethnic-specific perceptions of their implications for individual and family wellbeing rather than through immediate and tangible ethnic-specific dividends.

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[2] Total fertility rate is the average number of children a woman would have in her lifetime if she were to experience current age-specific fertility.

Method

We start by comparing trends in annual economic growth rates in the two countries in the post-Soviet period from available statistical data. We then examine the trends in probabilities of transition to first marital union during the post-Soviet era and compare the two sets of trends. We then plot trends in estimated annual TFRs for the same period and relate them to trends in economic performance and in entry into marital union. We then compare ethnic-specific TFRs from DHS and MICS to elicit fertility trends among main ethnic groups. Finally, to assess net ethnic differences in fertility, we fit a Poisson regression model predicting the number of children ever born from ethnicity while controlling for other potentially confounding factors. These multivariate analyses use the KazMICS and KyrMICS data.

Results

Economic trends in the post-Soviet period

Figure 1 depicts trends in annual Gross Domestic Product (GDP) growth rates in both countries. As can be seen, both countries, like the rest of the former Soviet Union, experienced a dramatic shrinking of their economies in the early years after their independence. The collapse of Kyrgyzstan's economy was particularly pronounced, but even in Kazakhstan the economy contracted by about 12% in 1994.

In the second half of the 1990s, both countries saw a no less impressive recovery of their economic growth rates. Yet Figure 1 also shows instructive differences in the scale of economic recovery between the two countries. After a brief stumble during the 1998 financial crisis, Kazakhstan's economy, boosted by oil and gas exports, posted a vigorous growth of about 10%

throughout most of the first decade of this century (the economic growth came to a virtual halt

during the latest global financial and economic crisis, but the effects of this crisis cannot be

captured by our data). In Kyrgyzstan, the rate of GDP growth in the past decade was generally

more modest and inconsistent.

Figure 1 about here

Figure 2 shows trends in absolute purchasing power parity-adjusted Gross National Income

(GNI) per capita in both countries. Kazakhstan, richly endowed with mineral resources, has

always been wealthier than its smaller southern neighbor. Moreover, while both nations

registered a steady growth in incomes after the decline in most of the 1990s, the graph also

clearly illustrates major differences between the two countries. Since the beginning of the past

decade, Kazakhstan's annual income per capita, boosted by oil and gas revenues, shot up to

exceed $10,000 in PPP dollars by the end of the decade, whereas Kyrgyzstan's PPP-adjusted

GNI barely reached one-fifth of that level.

Figure 2 about here

Entry into marital union

Figure 3 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*year interaction term and

with duration in years since 15th birthday (linear and quadratic) as a control (the outputs of the

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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 1998; Dommaraju and Agadjanian 2008), but the post-Soviet trends

are very similar between two groups. Starting in the end of the 1990s, the decline in the

probability of entering a marital union tends to level off in both groups, and especially so among

Kazakhs, resulting in a near convergence by the early years of the 2000s.

Figure 3 about here

Figure 4 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 through the end of the 20th century: an increase in probabilities in the late

1980s-early 1990s and a steep decline during most of the 1990s. The turn of the century

witnessed a minor reversal of the trend (more pronounced than Kazakhstan), 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 of 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.

Figure 4 about here

Total Fertility Rates

Figure 5 displays trends in total fertility rates (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. It is to note that the TFR has been consistently lower in Kazakhstan than in Kyrgyzstan although the gap becomes narrower toward the end of the 2000s as Kazakhstan's fertility rebounded somewhat more strongly than Kyrgyzstan's. In fact, while Kyrgyzstan's TFR remained almost one child lower in the end of the 2000s than in the late 1980s, Kazakhstan's estimated TFR for 2009 was just .2 lower than the 1989 estimate.

Figure 5 about here

Figure 6 juxtaposes TFRs computed from three surveys in Kazakhstan—the 1995 Demographic and Health Survey, the 1999 Demographic and Health Survey, and the 2006 KazMICS, and Figure 7 compares TFR estimates from two surveys in Kyrgyzstan—the 1997 Demographic and Health Survey and the 2006 KyrMICS. These survey estimates for the entire population of Kazakhstan are generally higher than the estimates from official birth registration data on which Figure 5 is based; for Kyrgyzstan, the survey estimate is higher for 1997 (DHS)

but is lower for 2006 (MICS), compared to the corresponding estimates from statistical agency data. The overall trends, however, are similar in the survey and in the published data.

Figure 6 and 7 about here

Figure 6, which shows ethnic-specific TFRs computed from two Kazakhstan DHS and KazMICS, illustrates stark ethnic differences in fertility between Kazakhs and Russians. These differences predate the post-Soviet crisis and are fairly well-researched (see, e.g., Agadjanian et al, 2008). A more interesting observation that can be made from Figure 6 is that fertility in each of the two ethnic groups declined sharply between the two DHS but stabilized and even slightly rebounded by the middle of the 2000s. In fact, a rebound was somewhat more palpable among Russians (from 1.38 to 1.46 children per woman) than among Kazakhs (2.50 vs. 2.52).

In Kyrgyzstan (Figure 7), both the overall and ethnic-specific trends appear somewhat different from those in Kazakhstan. It should be noted that in the second half the 1990s both Kyrgyz and especially Kyrgyzstan's Uzbeks had much higher fertility than did Kazakhs, whereas fertility levels of Kazakhstan's and Kyrgyzstan's Russians, more advanced on the path of the 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 in the mid-2000s. 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 Figure 6, the magnitude of this jump is suspect and may have been

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influenced by the small sample size (the dramatic drop in Uzbek fertility invites a similar suspicion for the same reason).

Children ever born

The MICS data allow for a multivariate analysis of children ever born. Whereas this analysis does not permit assessing temporal trends, it offers a more robust test of ethnic differences in lifetime fertility than does a comparison of TFRs as it adjusts for other factors that may influence fertility, such as area of residence and household wealth. The results of the Poisson regression predicting the number of children ever born for KazMICS and KyrMICS are presented in Tables 2 and 3, respectively. These results point to considerable ethnic differences between the titular and non-titular groups in each country. Whereas low fertility of ethnic Russians compared to fertility of the titular groups is of no surprise, it is noteworthy that the Russian-titular ethnicity gap is wider in Kyrgyzstan than in Kazakhstan. It is perhaps most interesting that in Kyrgyzstan Uzbeks' fertility also appears to be lower than that of the titular group even after controlling for education, area of residence, and economic conditions (although the difference between Uzbeks and Kyrgyz is only marginally significant). The Kyrgyz-Uzbek differences echo the earlier observed TFR patterns, but understanding the roots of the differences would require further investigation that is not possible with the KyrMICS data.

Tables 2 and 3 about here

Several other results should be mentioned. As one would expect, in both countries women with university education have significantly fewer children than women who only have

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secondary education or less. Interestingly, in Kazakhstan, women with secondary special

education have lower lifetime fertility than women with a university degree (secondary special is

not available as a separate educational category from the KyrMICS). When we test for

interaction between ethnicity and education, no interaction effects are statistically significant in

either Kazakhstan or Kyrgyzstan models (not shown).

Discussion and Conclusion

The two Central Asian countries compared in this study have shown both similarities and

differences in their post-Soviet economic and demographic development. In both countries, the

breakdown of the USSR led to a sharp economic decline, but the decline seemed to have been

more significant in Kyrgyzstan than in Kazakhstan. The post-crisis economic recovery started in

the middle of the 1990s and appears to have proceeded more vigorously and consistently in

Kazakhstan. Lacking major mineral resources, Kyrgyzstan was poorer than its northern neighbor

even in the Soviet times, but the income gap between the two countries began to widen rapidly

since the end of the 1990s. Although we do not have reliable data on income distribution, there is

no reason to believe that the two countries differed much on this measure. Importantly, the

growing income gap between the two countries parallel their political development: while

Kazakhstan enjoyed socio-political stability, Kyrgyzstan went through periods of major political

disruptions which culminated in the 2005 Tulip Revolution.

Using available aggregate and survey data we set out to examine whether these different

trajectories have impacted 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 almost monotonously 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. The analysis of entry into marriage, therefore, did not offer any support for the assumption that the minority group status would influence demographic response to changing political and economic conditions.

In contrast to the rates of entry into marriage—and 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. As we hypothesized, the rise of fertility appeared stronger in Kazakhstan, where the economy 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 end of the 2000s, the two countries' TFRs were as close to each other as 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 half 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

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stabilization among the titular group. Even so, ethnic Kyrgyz' TFR remained much higher than that of ethnic Kazakhs in Kazakhstan.

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 intriguing even though the exact values generated by our calculations may not be reliable due 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. In any case, it should be emphasized that the increase of 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 European countries 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

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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 Europeans in the early years of independence, has been spreading to Kyrgyzstan's largest ethnic minority. 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 decline of fertility among Uzbeks.

Although the analysis of fertility yielded some support for the minority group status perspective, we should stress that disentangling the influence of economic shocks or political conjuncture on demographic behavior from longer-term secular trends is notoriously difficult. The limitations of the data do not allow us to engage directly the recent analyses of fertility rise in Central and Eastern European countries that only a decade ago were characterized as having "lowest-low" fertility (Goldstein et al., 2009). Even with the available data, parallels between the European and Asian parts of post-communist Eurasia should be drawn with caution. Yet, it is the interpretation of ethnic differences in demographic outcomes in Central Asia that requires particular prudence as these differences are rooted not only in the groups' differential access to real or imaginary socioeconomic and political resources but also in their unique historico-cultural and demographic baggage (Barbieri et al., 1996; Blum, 1987). Because of these complexities and the limitations of our data, our findings cannot be conclusive. Yet they shed important light on the demographic dynamics in the least studied part of the post-Soviet world.

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Table 1. Language of Household Head in MICS Samples

Kazakhstan MICS 2006		Kyrgyzstan MICS 2006	
Language	Percent	Language	Percent
Kazakh	49	Kyrgyz	61
Russian	35	Russian	13
Other	16	Uzbek	20
		Other	6

Table 2. Children Ever Born, Poisson Regression with an Offset for Duration since First Union, KazMICS (N=8990)

Parameter	Estimate	SE	Wald 95% CI		Wald Chi-Sq	Pr > Chi-Sq
Intercept	-2.0098	0.0280	-2.0646	-1.9550	5167.76	<.0001
Russian (Kazakh as reference)	-0.3445	0.0170	-0.3778	-0.3113	412.90	<.0001
Primary or secondary (higher as ref)	0.0564	0.0203	0.0167	0.0961	7.77	0.0053
Secondary specialized	-0.0445	0.0207	-0.085	-0.0039	4.62	0.0316
Wealth index - 1 - poorest (richest as ref)	0.3946	0.0297	0.3363	0.4529	176.10	<.0001
Wealth index –2	0.2607	0.0280	0.2058	0.3155	86.85	<.0001
Wealth index—3	0.1729	0.0258	0.1224	0.2234	44.97	<.0001
Wealth index –4	0.0525	0.0245	0.0045	0.1004	4.60	0.0320
Urban (rural as reference)	-0.0412	0.0193	-0.0789	-0.0035	4.58	0.0323

**Table 3. Children Ever Born, Poisson Regression with an Offset for Duration since First Union, KyrMICS** (N=4431)

Parameter	Estimate	SE	Wald 95% CI		Wald Chi-Sq	Pr > Chi-Sq
Intercept	-1.6838	0.0362	-1.7547	-1.6128	2163.42	<.0001
Russian (Kyrgyz as ref)	-0.5393	0.0330	-0.6041	-0.4746	266.40	<.0001
Uzbek	-0.0400	0.0232	-0.0854	0.0054	2.98	0.0846
Secondary or below (higher as ref)	0.0629	0.0256	0.0127	0.1131	6.03	0.0140
Wealth index - 1- poorest (richest as ref)	0.1208	0.0385	0.0453	0.1963	9.84	0.0017
Wealth index –2	0.1082	0.0370	0.0357	0.1807	8.56	0.0034
Wealth index—3	0.0934	0.0363	0.0222	0.1645	6.62	0.0101
Wealth index –4	0.0266	0.0330	-0.0380	0.0911	0.65	0.4204
Urban (rural as reference)	-0.1172	0.0248	-0.1658	-0.0687	22.39	<.0001

Figure 1. Annual GDP Growth Rates (%), Kazakhstan and Kyrgyzstan
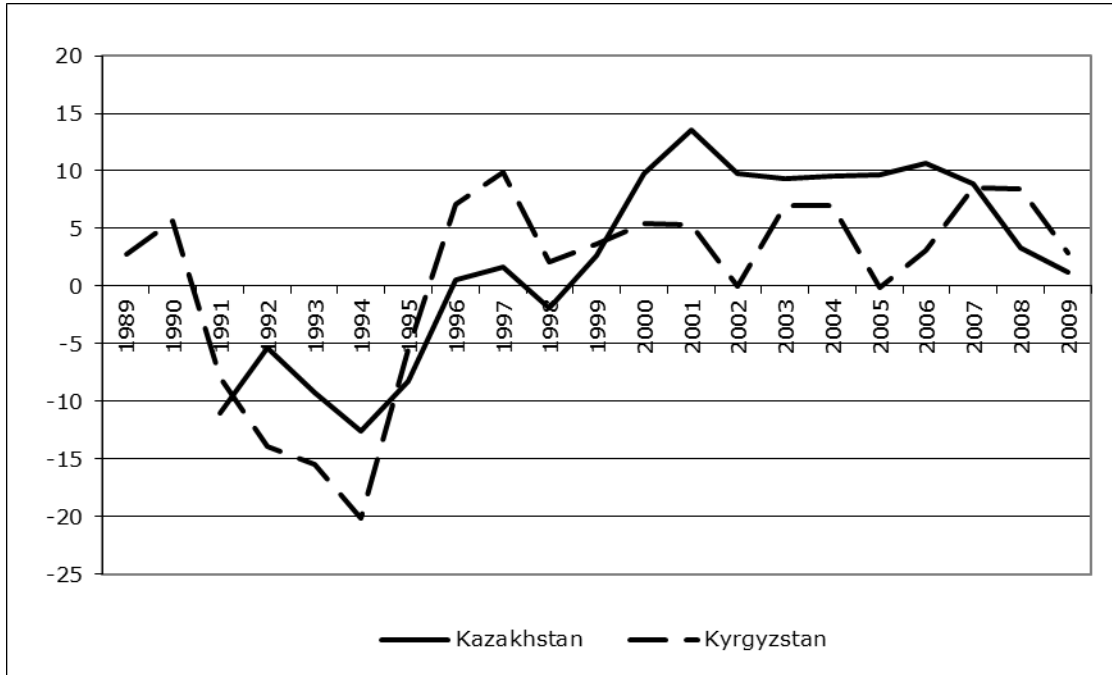
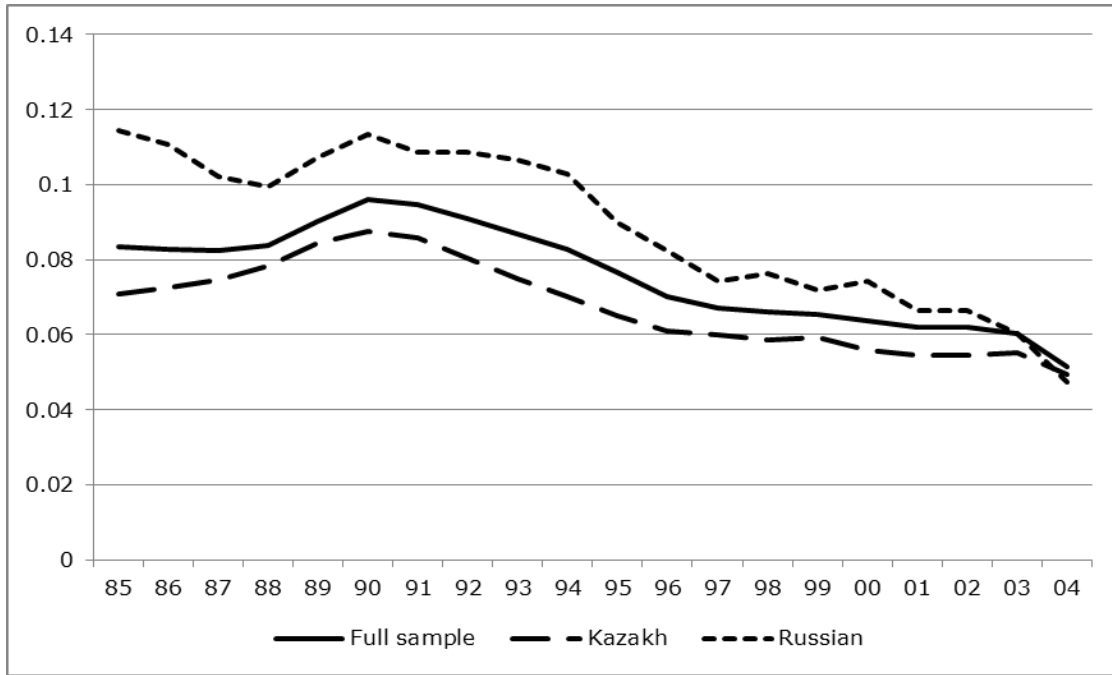Source: World Bank national accounts data, and OECD National Accounts data files,

<http://databank.worldbank.org>

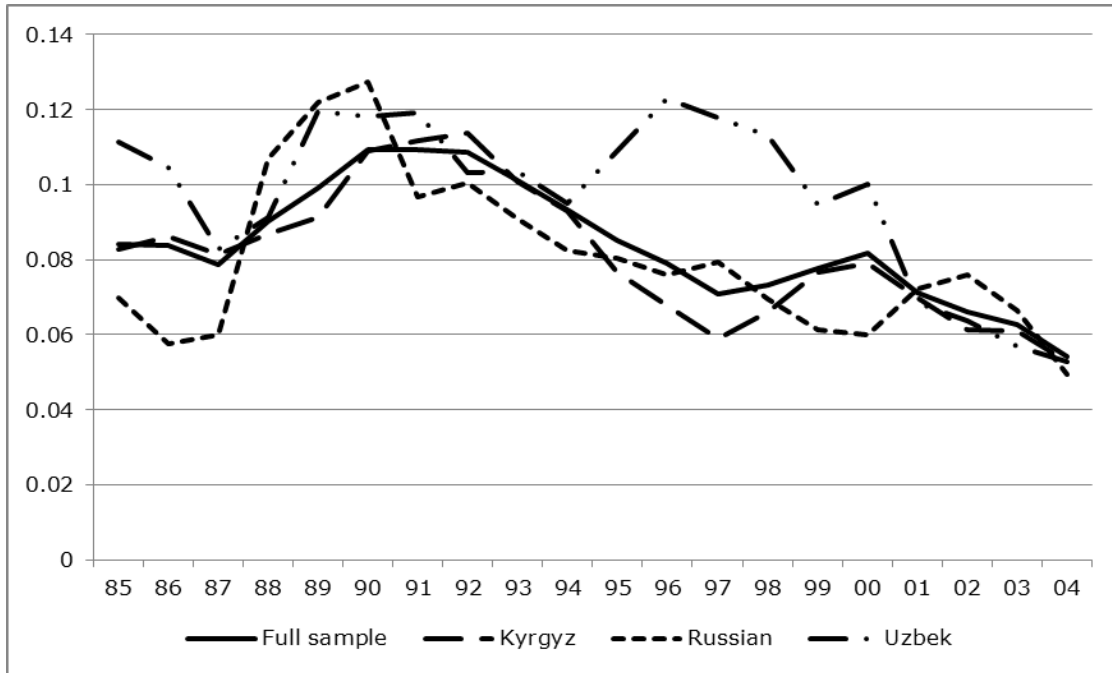**Figure 2. GNI per capita, PPP (current international $), Kazakhstan and Kyrgyzstan**
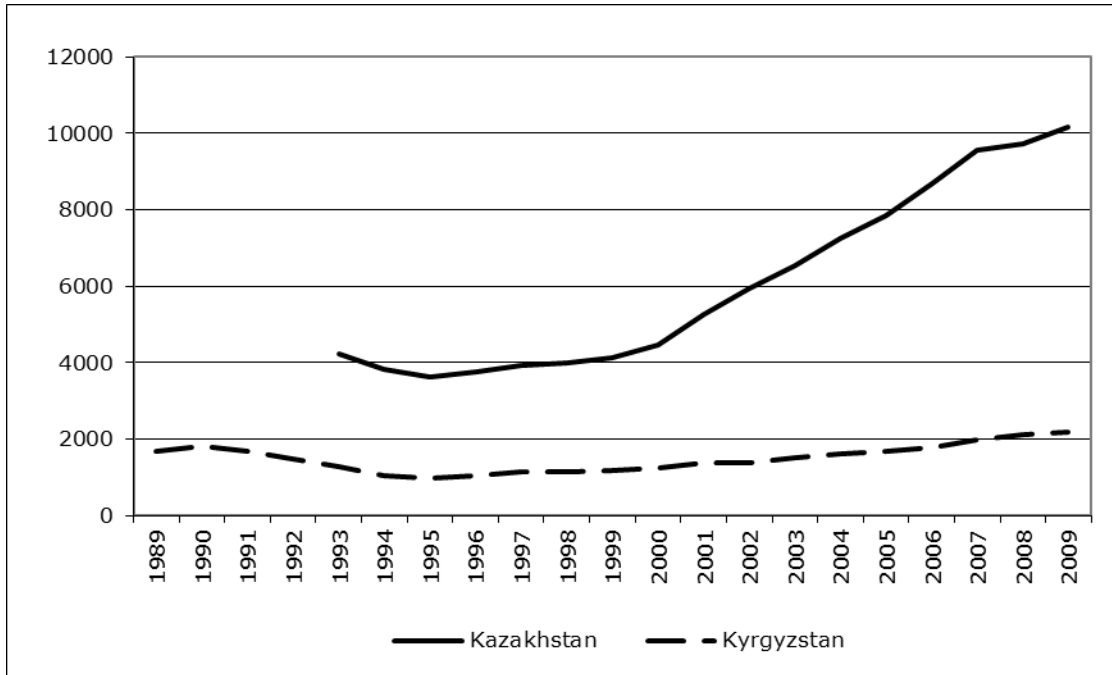
Source: World Bank, International Comparison Program database, <http://databank.worldbank.org>

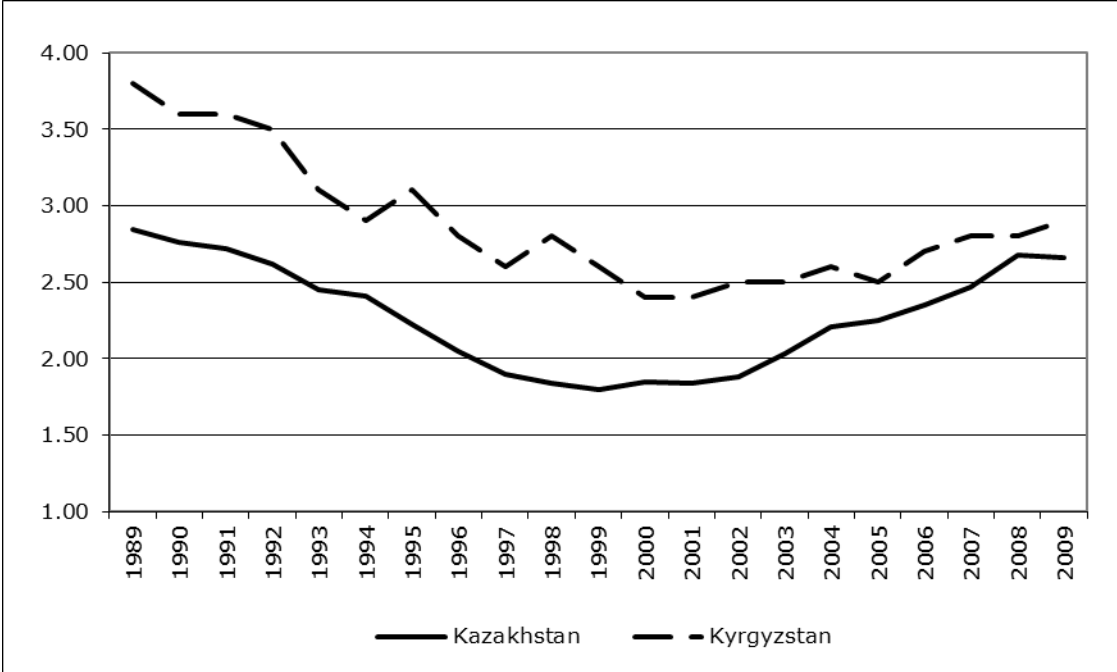**Figure 3. Predicted Probability of Entry into First Marital Union in Kazakhstan**

Source: Computed by the authors from KyrMICS data

Figure 4. Predicted Probability of Entry into First Marital Union in Kyrgyzstan
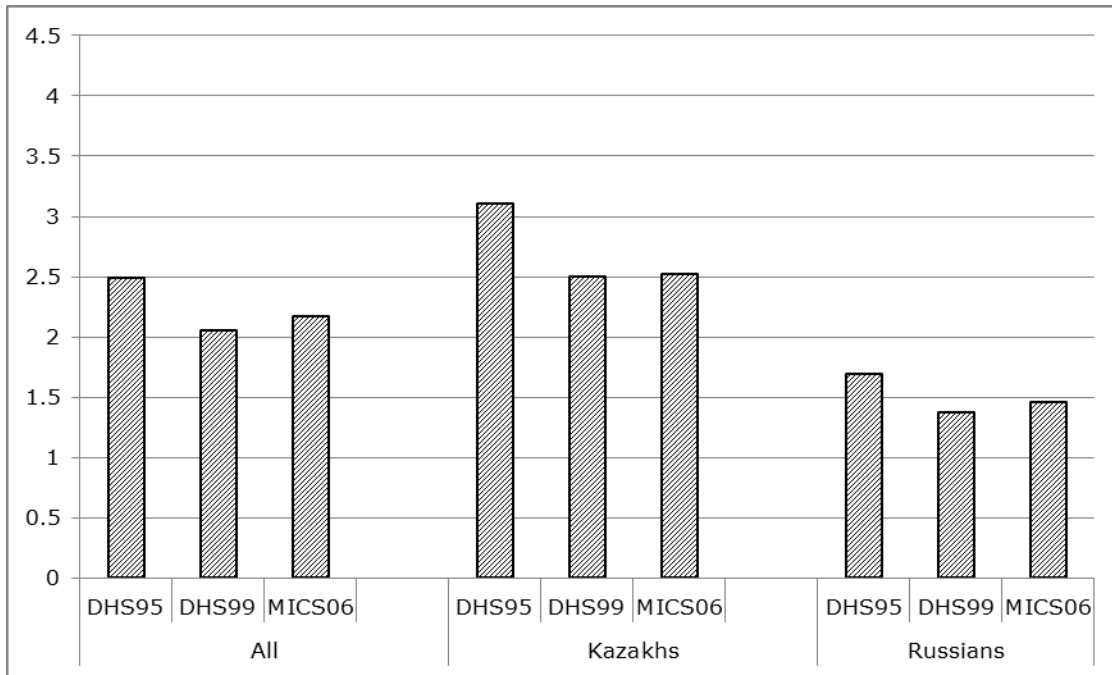

Source: Computed by the authors from KyrMICS data

Figure 5. Trends in Total Fertility Rates in Kazakhstan and Kyrgyzstan
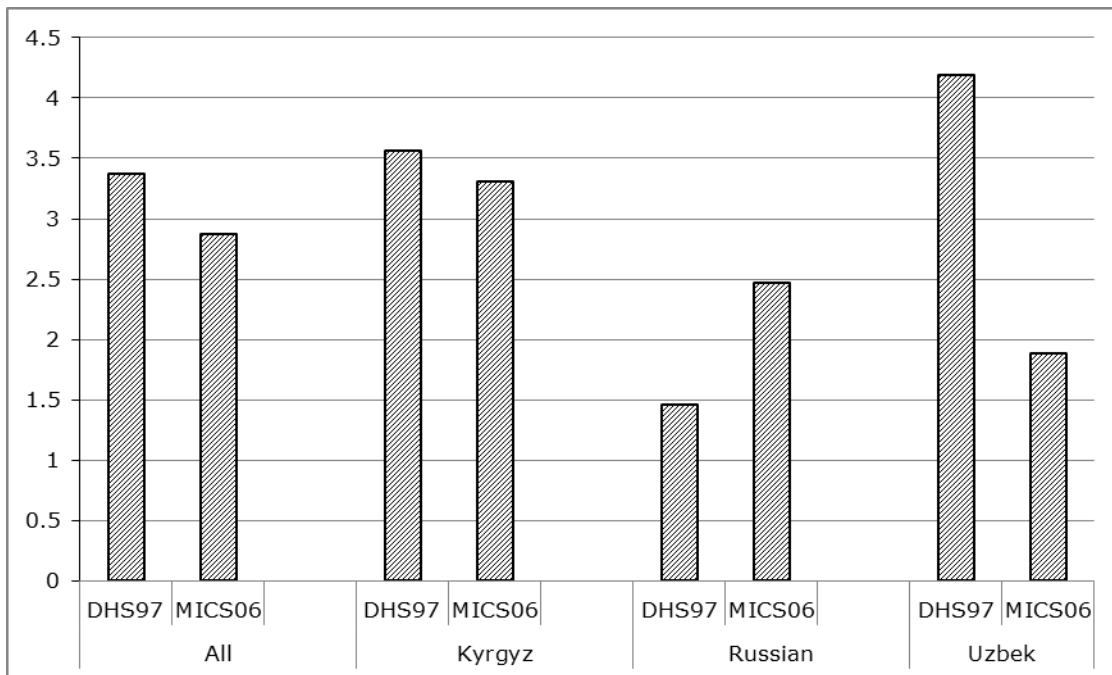

Source: UNICEF Regional Office for CEECIS TransMONEE 2011 DATABASE

Figure 6. Kazakhstan's Ethnic TFRs Estimated from DHS and MICS

Source: Computed from KazDHS 1995, 1999 and KazMICS

Figure 7. Kyrgyzstan's Ethnic TFRs Estimated from DHS and MICS

Source: Computed from KyrDHS and KyrMICS