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**Culture, Modernization, and Politics:
Ethnic Differences in Union Formation in Kyrgyzstan**

Victor Agadjanian and Premchand Dommaraju

Abstract

The unique cultural and political history of Central Asia has produced intriguing ethnic variations in union formation. We use data from a survey of 1535 young adults conducted in 2005 in northern Kyrgyzstan to examine ethnic patterns of entry into marriage vs. cohabitation. To reflect the historico-cultural and political realities of Kyrgyzstan, we subdivide ethnic Kyrgyz into two categories based on the degree of linguistic Russification—more-Russified Kyrgyz and less-Russified Kyrgyz—and compare them to each other and to respondents of European origin. The results of the multinomial discrete-time logit models show significant differences among the three groups. Thus Europeans were most likely to enter cohabitation whereas less Russified Kyrgyz were least likely to do so, net of other factors. The three groups were lined up in the converse order with respect to probability of entering marriage, but this ordering was present only among women. In contrast, among men, more-Russified Kyrgyz were less likely to marry than both less-Russified Kyrgyz and Europeans. We interpret these findings in light of long-term historico-cultural and demographic distinctions as well as more recent politically-induced cleavages in Kyrgyzstan.

Keywords: Union Formation; Marriage; Cohabitation; Ethnicity; Central Asia; Kyrgyzstan

Introduction and background

Inspired by John Hajnal's (1965) seminal writings on distinct marriage patterns in Europe and Asia, demographers have long strived to understand regional and temporal aspects of union formation. Family formation dynamics in the part of the world that once constituted the Union of Soviet Socialist Republics, where early and nearly universal marriage coexisted with low and rapidly declining fertility, seemed particularly puzzling. As Soviet rule fades in historical memory, the peculiar patterns of family formation in the nations that emerged from its rubble are being reevaluated in terms of more enduring demographic, socioeconomic, and cultural legacies. The notion of Central Asia—not only as a vast territorial entity but also as a venue where various European- and Asian-origin traditions have met and intertwined into a dazzling sociocultural kaleidoscope —has gained currency as a new (or rediscovered) point of reference for a variety of social assessments, including those dealing with nuptial and reproductive regimes. The unique political history of the region—from the Russian imperial expansion, to the secluded, centrally commanded regime of the communist period, to swift, drastic, and painful reforms following the collapse of communism—have added complexity to its family patterns. This unique historical background should be taken into full account when extending the debate on the nature and mechanisms of post-Communist changes in family formation in much better studied parts of the post-Communist world, such as Eastern Europe and Russia, to the Central Asia context.

Our study looks at ethnic differences in entry into first union—either registered (marriage) or unregistered (cohabitation)—using unique data from the Kyrgyz Republic, also known as Kyrgyzstan, a landlocked mountainous Central Asian nation of 5.3 million inhabitants and a Gross National Income per capita of \$740 (The World Bank 2008). Kyrgyzstan is a multi-ethnic country, whose population consists of native ethnic groups of mainly Turkic roots, such as Kyrgyz, the eponymous and largest group, and Uzbeks, and European-origin groups, whose members for decades, if not centuries, were trickling into Central Asia, willingly or not, from the

European part of the Russian-Soviet empire.¹ Despite a long history of uneasy coexistence, the two parts of Kyrgyzstan's population—natives (primarily the Kyrgyz and Uzbeks) and Europeans (mainly ethnic Russians)—developed and preserved distinct demographic characteristics, of which the best known is the higher fertility of the natives (Bondarskaya and Darsky 1988; Darsky and Andreev 1991). At the same time, both parts were characterized by relatively early marriage, especially among women, which was a common feature in the former Soviet Union (Bondarskaya and Ilyina 1979; Denissenko 2004; Vishnevsky 2006, chap. 7). The demise of the Soviet system, the independence that Kyrgyzstan, like the other Central Asian Soviet republics, reluctantly embraced in 1991, and the early post-independence period saw a tumbling of fertility and a retreat from marriage (Denissenko, 2004; 2005; Dommaraju and Agadjanian, 2008), paralleling similar trends in other parts of the former Soviet Union and Eastern Europe (Frejka 2008; Koytcheva and Philipov 2008; Sobotka 2004; Sobotka and Toulemon 2008; Zakharov 2007). Although systematic studies of societal forces and mechanisms underlying these trends in Central Asia are yet to be done, the economic pressures and ideational changes that have produced them elsewhere in the post-communist world have been at work in the region as well. However, the demographic evidence from the region, scarce and questionable as it is, also points to a remarkable persistence of the European-Asian differentials in entry into and progression through childbearing and in fertility regulation (e.g., Agadjanian 1999; Agadjanian 2002; Agadjanian, Dommaraju, and Glick 2008; Agadjanian and Makarova 2003; Agadjanian and Qian 1997; Denissenko 2004; Dommaraju and Agadjanian 2008).

With respect to entry into marriage, while after Kyrgyzstan's independence the proportion of never married increased in all ethnic groups, it did so more among ethnic Russians and other Europeans than among Kyrgyz (Denissenko 2005). At the same time, ethnic differentials in

¹ Strictly speaking, Kyrgyz, Uzbeks and other Turkic groups that inhabit Central Asia are not autochthonous to the region but can be considered native from the standpoint of a historically more recent and culturally and politically more consequential Asian vs. European divide.

mean age at first marriage, became less pronounced and in the case of the Kyrgyz and Russian women practically disappeared (Denissenko 2004). It is important to note urban-rural differences in age at first marriage among ethnic groups. Thus, at the time of independent Kyrgyzstan's first population Census conducted in 1999, mean age at first marriage was 27.1 years among urban Kyrgyz men and 24.6 years among urban Kyrgyz women, which are almost 1 and 2 years higher than among the respective groups in rural areas (26.2 and 22.7 years). Among Russians, the difference between urban and rural areas was small among women—23.4 and 22.8 years, respectively—and non-existent among men (25.6 years in both areas) (Denissenko 2005). It should also be noted that ethnic intermarriage has not been common in Kyrgyzstan. Thus according to the 1999 Census, only 4.8 percent of married Kyrgyz had non-Kyrgyz partners, and of those marriages, only 15% percent (0.4% percent of all marriages in Kyrgyzstan) were between a Kyrgyz and a Russian (Haug 2004, p. 137).

In examining union formation dynamics in a setting like post-Soviet Kyrgyzstan, one should be aware of the country's ethnic-specific external migration trends and their potential effect on these dynamics. As in the rest of Central Asia, the years immediately preceding and following independence were characterized by massive out-migration of Europeans (Kumskov 2007). Although the European flight from Kyrgyzstan subsided in later years, net migration of Europeans has remained negative. As a result of Europeans' outmigration and their lower fertility, their share in the country's population has continued to decline. Thus, according to Kyrgyz official statistics, the share of ethnic Russians, by far the largest group among Europeans, dropped from 21.5 percent to 12.5 percent between 1989 and 1999, the two census years (Population of Kyrgyzstan, 2000, p. 70).² Also, the European population has a skewed sex ratio, measured as the ratio of the number of men to the number of women: the 1999 Census registered a sex ratio of .83 among ethnic Russians, compared to a sex ratio of 1.00

² Data from the 2009 National Census are not available at this writing.

among Kyrgyz (computed from Population of Kyrgyzstan, 2000, p. 106). The publicly available 1999 Census data do not provide sex composition by age for the main ethnic groups. However, while it is possible that these sex imbalances among Russians and other Europeans may have been partly due to vast sex differentials in mortality (Guillot 2004), it is also likely that at least a portion of these imbalances could be explained by disproportionate propensity of young European men to migrate.

Most research on family formation patterns in the former Soviet Union has dealt with marriages, i.e., union registered through *zags* (civil registry office). The formation of unregistered (consensual) unions, known popularly in Russian as *grazhdansky brak* (“citizen marriage”) or *sozhitel'stvo* (“cohabitation”), has received much less attention due to both the scarcity of adequate data and the elusiveness of the concept in the Soviet and post-Soviet cultural context.³ The 1999 Census for the first time in the history of statistical data collection in Kyrgyzstan differentiated between “registered marriages” and “unregistered marriages” (regardless of co-residence). The share of unregistered marriages was 4.8 and 5.2 percent among men and women aged 15 and over, respectively. This share was even larger among the 18-29 age group (the age range covered in the survey on which our study is based): 5.7 and 7.4 percent among men and women, respectively (computed from Population of Kyrgyzstan 2000, p. 177). Although this share was still low by the standards of much of Europe (Sobotka and Toulemon 2008), it was comparable to those in the former Soviet bloc (Denissenko 2004).

Unregistered unions existed in the Soviet times (Vishnevsky 2006, p.100), but legal barriers, such as residential registration regulations, as well as cultural norms discouraging cohabitation

³ “Citizen marriage” (гражданский брак) is a colloquial phrase used throughout the former Soviet Union to define unregistered union. In its usage is therefore not an equivalent of English “civil marriage”, i.e., marriage that is registered through a civil ceremony. The notion of “civil marriage” (registered marriage) is better conveyed by another Russian colloquial expression—“zakonny brak” (законный брак), or literally “legal marriage.” As for “sozhitel'stvo” (сожительство), or cohabitation, this term, at least in Kyrgyzstan, may have a broad meaning, including sexual partnership without sharing a residence. It also often connotes low morals.

limited their spread (Zakharov 2008). It has also been argued that in Russia the shortage of housing was among major reasons for low levels of unregistered marital cohabitation (Avdeev and Monnier 1999). Although the conditions in Kyrgyzstan and other parts of the former Soviet Union may have been somewhat different, it is possible that a combination of cultural and legal barriers and housing shortage may have slowed the spread of unregistered cohabitation. Yet, despite the lingering cultural, legal, and material obstacles, studies of public opinion in post-Soviet Russia showed growing acceptability of unregistered unions, especially among young people (e.g., Bodrova 1996; Ivanova and Mikheeva 1998, both cited in Vishnevsky, 2006, p. 100-101). Although comparable studies in Kyrgyzstan or other parts of Central Asia are not available, a similar trend probably has been present there too.

Whereas the rise in unregistered unions in Central Asia, as in other post-Soviet settings, may have reflected ideational changes in the direction of greater modernization, it may also be partly due to re-traditionalization of Central Asian societies, especially in religious matters and especially among Central Asian native groups. Thus among Kyrgyzstan's Muslims some marital couples may live together having received a blessing from a mullah but without registering their unions in *zags*. No data on prevalence of such unions in Kyrgyzstan are available, but we suspect that it should be higher in rural areas of Kyrgyzstan's south, where Islam wields considerable influence, than in its generally less religious capital Bishkek and surrounding northern provinces, where our data were collected.

The share of unregistered unions has varied noticeably across Kyrgyzstan's ethnic groups. Thus, according to the 1999 Census, among Kyrgyz men and women 15 years and older (no ethnic breakdown for specific age groups is available) 4.3 percent and 4.4 percent, respectively, were in unregistered unions, whereas the corresponding shares among ethnic Russians were 7.2 and 6.3 percent (computed from Population of Kyrgyzstan, 2000, p.216). In comparison, the corresponding shares recorded in the 2002 Russia population Census were 6.1 and 5.1 percent

for men and women aged 16 and older, respectively (All-Russia Population Census 2002).⁴ The higher prevalence of unregistered unions among ethnic Russians, a more demographically modernized segment of Kyrgyzstan's population, indirectly suggests that this marital arrangement is a sign of departure from traditional marital practices rather than of their reassertion through avoidance of registration of religious unions. Mirroring these ethnic differences, Kyrgyz had higher prevalence of registered marriages: 57.2 and 55.7 percent among men and women, respectively, compared to 53.5 and 44.6 percent among Russian men and women, respectively.⁵

Conceptualization and hypotheses

The recent literature on union formation in post-Communist Central and Eastern Europe explains the postponement of and retreat from marriage and rise in cohabitation observed in those settings by a combination of increased economic uncertainty, loosening social and sexual norms, changing gender ideology, and greater personal freedoms and opportunities in the context of the rapid and radical transition to market economy and liberal democracy (Bradatan and Kulsar, 2008; Frejka 2008; Perelli-Harris 2008; Sobotka 2004; Zakharov 2007). Although these processes have affected all countries of the region, there have remained considerable cross-country variations in age at first marriage and especially in the dynamics of unregistered unions, which have reflected each country's sociocultural traditions and economic circumstances (see Sobotka and Toulemon 2008 for a recent review). In contrast to the growing

⁴ The Russian Census does not provide ethnic-specific information on either marriage or cohabitation. Ethnic Russians constituted about 80 percent of Russia's population in 2002. Because both the Kyrgyz and Russian Censuses asked about the registration status only of those who answered affirmatively to the question on whether they were married, it is possible that both Censuses undercounted unregistered unions that in the eyes of some individuals involved in them were not "marriages." Survey data from Russia support the possibility of the census undercount (Vishnevsky, 2006: p.101).

⁵ The large gender difference in the percentage married among Russians may be due to a combination of the migration-related sex imbalance, a higher divorce rate among that group and gender differences in the likelihood of remarriage.

evidence of between-country variations in entry into registered marriage and in levels of cohabitation, few studies have addressed within-country ethnic differences in union formation patterns.⁶ Ethnic differences, however, are often non-trivial and are typically rooted in socioeconomic and cultural marginalization of ethnic minorities. Ethnic demography of union formation in Eastern Europe has been limited mainly to research on gypsies (Roma), an ethnic group most consistently and harshly discriminated against throughout Eastern Europe. The Roma have long had distinct patterns of family formation and organization (Barany 2002). Preference for cohabitation over marriage—or rather the group's disregard for state registration of marital union—has been one expression of this exclusion-based distinction (Barany 2002; Bradatan and Kulsar, 2008; Koytcheva and Philipov 2008).

Whereas studies focusing on the ethnic dimension of marriage and cohabitation in the former communist countries remain scarce, the rich literature on ethnic and racial differences in union formation in western societies, despite vast contextual dissimilarities, can usefully inform our analysis. Thus, studies have documented differences in patterns of union formation between whites and blacks and other minorities in the U.S. (Bennett, Bloom, and Craig, 1989; Fergusson, 1995; Lichter et al., 1992; Raley, Durden, and Wildsmith, 2004; Schoen and Kluegel, 1988) and the U.K. (Berrington, 1994). Much of the literature has focused on the structure of ethnic-specific marriage markets, and especially on the sex imbalances in the African American population of marriageable ages. Most studies on the subject have concluded that the age-sex structure of the marriage market has only a modest influence on ethnoracial group-specific union formation outcomes (e.g., Guzzo 2006; Lichter, LeClere, and McLaughlin 1991; Lichter et al. 1992; Lloyd and South 1996; Schoen and Kluegel 1988). This conclusion has prompted researchers to look for cultural roots of ethnoracial differences in marriage and

⁶ The lack of attention to this subject is probably due to the relatively ethnic homogeneity in the nation-states of Eastern European and of the European part of the former Soviet Union; in the few countries where ethnic diversity is substantial (e.g., the Baltic countries, Ukraine), the demographic differences among ethnic the constituent groups are relatively modest.

cohabitation (Katz 2001; Mitchell 2001; Oropesa 1996). The literature has also highlighted the role of the structure of economic opportunities and corresponding perceptions in shaping ethnic and race-specific marital preferences and choices (Bulcroft and Bulcroft 1993; Manning and Smock 1995; Oppenheimer et al. 1997). A combination of these cultural and structural factors (similar, in principle, to the case of East European gypsies described above) leads to enduring ethno-racial differences in attitudes toward marriage and desires to marry (Bulcroft and Bulcroft 1993; Katz 2001; Oropesa 1996; Oropesa, Lichter, and Anderson 1994; South 1993).

Projected on to the post-Soviet reality of Central Asia, these findings imply that ethnic differences in transition to marriage or cohabitation should be seen through the prism of ethnic groups' different positioning in society resulting largely from the dramatic political changes that accompanied the dissolution of the Soviet Union. This different positioning could lead to variations in perceptions of future socioeconomic opportunities, especially for men, across ethnic groups and therefore differentially affect group propensities toward marriage. However, when examining ethnic differences in Kyrgyzstan and similar Central Asian settings through this prism, one should not lose sight of long-term ethnic-specific demographic and cultural legacies that are intertwined with groups' political and socioeconomic fortunes but nonetheless may operate independently of each group's specific sociopolitical predicaments. Finally, one should take into account the age-sex composition of the ethnic or racial groups in question. A low ratio of men to women in corresponding marriageable age cohorts may lead to female "marriage squeeze" (Muhsam 1975) thus making it difficult to marry for women and increasing the likelihood of cohabitation (Greene and Rao 1995). Fully disentangling the influence of the political and economic conjuncture from that of longer-term demographic modernization and of ethnic-specific age-sex imbalances in a setting like Kyrgyzstan is probably impossible due to inadequate data, but one can reach a better understanding of these confounding influences by comparing groups with different levels and configurations of sociopolitical marginalization, demographic characteristics, and cultural baggage.

We focus on ethnic differences in entry into first union. While the literature typically employs standard markers of ethnicity (*natsional'nost*, or nationality, in Soviet and post-Soviet parlance), such as “Kyrgyz” or “Russian,” we use a modified classification that takes into account the consequences of decades of cross-ethnic interaction. This interaction, often sponsored and controlled by the imperial and then Soviet governments, has not resulted in much genetic intermixing but has certainly led to considerable cultural interpenetration. Yet, like most colonial cultural encounters, this interpenetration was grossly asymmetrical: Kyrgyz were forced to embrace the Russian culture and language, two pillars of the colonial modernizationist project, while Russian and other European-origin residents tended to view the Kyrgyz and other native cultures and languages as relics of the backward past that were soon to vanish in the all-transforming onslaught of modernity. Despite the inglorious burial of the Soviet modernizationist scheme, the ensuing massive out-migration of ethnic Russians and Russian-speaking members of other ethnic groups, and years of attempts at boosting the prominence of local languages and cultures, the Russian language (and to a large extent, the entire cultural complex that it has helped to shape and cement) retains its prestige and remains widely used by different ethnic groups, including the titular ones, in Kyrgyzstan and other Central Asian societies (Landau and Kellner-Heinkele 2001; Orusbaev et al. 2008).

With this historic-cultural background in mind, in our analysis we define three subpopulations that are not ethnic groups in a conventional sense of the term but are rather *ethnocultural* categories, i.e. aggregations whose cultural identities are rooted in ethnicity yet transcend the boundaries of the official ethnic nomenclature inherited from the Soviet times (i.e., Kyrgyz, Russian, Ukrainian, etc.). Thus we combine ethnic Russians, Ukrainians, Germans, and mainly Russian-speaking representatives of other ethnic groups of European origin into a single category of “Europeans” (a term that is widely, even if informally, used in Central Asia). Europeans, in general, completed the first demographic transition earlier and are more advanced on the path of the second demographic transition than native Central Asian groups.

As the most demographically modernized segment of Kyrgyzstan's population, they should display greater inclination toward cohabitation and to postponement of formal marriage. We also subdivide ethnic Kyrgyz into two segments—the more “Russified” one and the less “Russified” one—assuming that the former should be closer than the latter to Europeans in demographic behavior, including union formation preferences and patterns.

As we noted earlier, however, in Kyrgyzstan, as in other parts of Central Asia, the demographic choices and behavior of Europeans are not a mechanical product of their greater demographic modernization. The independence of Central Asian countries dramatically reversed the political fortune of its European-origin inhabitants by transforming them from a numeric minority that enjoyed considerable cultural privileges under the Soviet system into a political minority that feels besieged by the nativist sloganry and deeds of the indigenous-controlled governments (Kosmarkaya, 2006). In contrast to Europeans, Kyrgyz have seen their group political status rise, at least symbolically, in the wake of independence. Although the economic hardships and social uncertainties of post-Soviet transition have transcended ethnic boundaries in Kyrgyzstan, perceived group-specific political vulnerability can amplify the individual sense of economic and social insecurity, especially because a large portion of economic and social resources is still doled out by the state and therefore is (or is perceived as) politically constrained. Thus, by bringing together the cultural and political interpretations of demographic behavior we can see the three categories—less-Russified Kyrgyz, more-Russified Kyrgyz, and Europeans—as forming a continuum in both an ethnocultural and an ethnopoltical sense. The first category, less-Russified Kyrgyz, is both politically comfortable and demographically traditional. Europeans, on the other extreme of the continuum, feel most politically vulnerable and are most demographically modernized. In the middle are more-Russified Kyrgyz, who share the sense of political security with their less-Russified co-ethnics but are more modernized demographically. The ethno-political equivalence of the two types of

the Kyrgyz pulls them together, while their culturally-shaped demographic differences push them apart.

We set out to examine how the above differences may manifest themselves in the probability of entry into union across the three categories (to which we will hereafter refer as ethnic for simplicity). At the same time, we want to relate these differences to constraints imposed by gender ideology and the nature of community environment (rural, town, or city). We look at probabilities of entry into first union—either registered (*zags*) marriage or unregistered cohabitation, which we treat as competing events. We therefore do not consider here transition from cohabitation to registered marriage.⁷

Hypotheses

Our conceptualization of demographic choices and behavior, rooted in both group cultural-demographic legacy and group political positioning, leads to the following set of hypotheses. The first and main hypothesis posits that, net of other factors, the probability of entry into cohabitation increases, while the probability of entry into marriage decreases as one moves from the indigenous to the European end of the proposed ethnic continuum. Thus Europeans, who are culturally and demographically most modernized and whose self-perceived group status and future prospects in Kyrgyzstan are most precarious, will be most likely to opt for cohabitation and will be least likely to enter registered marriage. Accordingly, less-Russified Kyrgyz, politically secure and culturally most traditional, will be on the other end of the continuum, with the highest likelihood of entry into marriage and the lowest likelihood of entry

⁷ Whether and when cohabitation is followed by marriage is a subject of a growing cross-national body of literature within a broader field of research on the second demographic transition. Most of the western literature agrees that cohabitation is not a lifetime alternative to marriage but rather a transitional phase between singlehood and marriage (Smock, 2000) even though this transition has been increasing in length and complexity (Heuveline and Timberlake, 2004; Sobotka and Toulemon, 2008; Zakharov, 2008). The literature also suggests that the likelihood of converting cohabitation into marriage varies across ethno-racial groups (Manning and Smock 2002).

into unregistered union. Finally, more-Russified Kyrgyz, who share traits of both other groups, will find themselves somewhere between them.

Two other hypotheses that we test are ramifications of the primary hypothesis. The second hypothesis is that the expected differences between Europeans and less-Russified Kyrgyz in the probability of entry into either marriage or cohabitation will be more pronounced in urban than in rural areas. While rural residents may be in general more traditional than urban dwellers regardless of their ethnicity, the urban-rural cultural and demographic divide is wider among Europeans than among Kyrgyz. In addition, urban Europeans, who have witnessed a particularly large exodus of their co-ethnics in the post-Soviet years, may be even less comfortable and optimistic politically than rural Europeans, which should further magnify ethnic differences in urban areas. At the same time, a large share of less-Russified Kyrgyz in urban areas come from more traditional families of rural-to-urban migrants, which should further increase their cultural distance from urban Europeans. Reflecting their intermediate demographic, cultural, and political position in society, more Russified Kyrgyz will situate themselves between the two ends of the ethnic continuum in urban and rural areas alike.

Our third and last hypothesis posits that ethnic differences in the probability of entry into cohabitation will be more pronounced among men than among women, whereas ethnic differences in the probability of entering marriage will, on the contrary, be more pronounced among women than among men. This hypothesis stems partially from our view of ethnically constrained gender systems in Kyrgyzstan. Thus we assume that European men are most inclined to and capable of marital “innovations” such as unregistered cohabitation, whereas less Russified Kyrgyz women are demographically and socially most traditional and therefore more likely to opt (or have their parents opt) for registered marriage. Yet, at the same time, we assume that the expected differences are further amplified by the socio-political environment favoring ethnic-selective migration and consequent distortion of ethnic marriage markets. Although systematic data are lacking, we assume that European men are most migration-prone

and therefore less likely to commit to formal marriage. Yet, the highly unbalanced sex ratio among Europeans and therefore the wide availability of potential marriage partners for European men may counterbalance their reluctance to compromise their migrability by taking marriage vows. Accordingly, the deficit of marriageable European men may depress European women's ability to find marital partners and therefore increase the differences between them and Kyrgyz women in the probability of getting married. Again we expect to find more Russified Kyrgyz in the middle ground between the two ethnic "extremes."

Data and Method

Our analysis uses data from a survey of young people conducted in 2005 in northern Kyrgyzstan, where the Kyrgyz are an absolute majority but Russians and other Europeans still constitute a sizeable minority. The survey sample consisted of 1535 men and women aged 18 to 29 divided equally among Bishkek, Kyrgyzstan's capital, and two northern *oblasts* (provinces). A three-stage cluster sample was used in each of the three domains: a cluster (a village in rural areas or a borough in urban areas) was first selected with a probability proportional to size, then households were randomly selected in each cluster, and finally, individuals of target age were randomly selected within each household. This procedure generally assured an equal representation of sexes. In clusters where it yielded a sex imbalance (usually due to unavailability of men), the underrepresented gender was oversampled. In each oblast, rural and urban areas were sampled separately. To allow for sound ethnic comparisons, in rural areas, where Kyrgyz greatly predominate, the non-Kyrgyz population was oversampled by making the probability of a village selection inversely proportional to the share of its Kyrgyz population as recorded in the 1999 national population census. The survey collected a variety of information on respondents' current demographic, cultural, and socioeconomic characteristics as well as marital, reproductive, migration, educational, and employment histories.

The main predictor, ethnic category, is a set of dummy variables: European-origin (European), more-Russified Kyrgyz, and less-Russified Kyrgyz. The last two categories are distinguished on the basis of reported language use outside the home: the more-Russified Kyrgyz are those who reported using mainly Russian or both Russian and Kyrgyz, whereas less-Russified Kyrgyz are those who reported speaking Kyrgyz outside the home. It is important to stress again that these two groups and the terms we use to define them do not represent real ethnic entities and designations but are rather “ideal types” that are meant to capture the degree of cultural influence and its political implications in contemporary Kyrgyzstan. Respondents who did not fit in any of the three groups (e.g., ethnic Uzbeks, Kazakhs, Dungans, Uygurs, Tajiks, Turks, Kurds, and Azerbaijanis) totaling less than seven percent of the survey sample, are excluded from the analysis because of the small size and ethnic diversity of this residual segment. In the resulting sample, less-Russified Kyrgyz constituted 33%, more-Russified Kyrgyz 29%, and Europeans 38%. We recognize that this simple three-element classification does not fully capture the ethnocultural complexity of the study area, but it seems sufficiently sensitive to detect main ethnic patterns of entry into union, and in particular the culturally intermediate position in which linguistic Russification places more-Russified Kyrgyz. A similar classification employed in research on Kazakhstan, Kyrgyzstan’s neighbor to the north, has proven very informative in studying both marriage and reproduction (Agadjanian 1999; 2002; Agadjanian et al. 2008; Agadjanian and Qian 1997).

This predictor is time-invariant: we assume that the language use patterns are firmly established by early adulthood and do not change much during the short age span that our study examines. Other covariates are: age, gender, area of residence (city, town, rural), pregnancy (whether or not the female respondent was pregnant or the male respondent had a pregnant partner beyond the first month of pregnancy), childbearing (had at least one child or not), current employment status (working outside or not), current educational status (studying or not), mother’s education (incomplete general secondary or less, specialized secondary, and

complete or incomplete higher), and religiosity (atheist/not religious vs. somewhat/very religious), and migration experience (ever migrated or not). Educational attainment is not included in the model because it is highly dependent on age. Nearly all respondents had at least secondary education and nearly all those who were studying at the time of the survey were enrolled in institutions of higher learning (universities or *instituts*). All covariates are time-varying except for gender, mother's education, and religiosity (although the strength of religious beliefs and involvement can change over time, we assume that given the relatively short age span under consideration, religiosity reported at the time of the survey is a reasonable proxy for the general level of religiosity in a few preceding years as well).

The outcome of interest is entry into union by type of union. Because the outcome variable can take three unordered values (entered a registered union, entered an unregistered union, did not enter a union), we use multinomial logistic regression for multivariate modeling (Borooah 2001). To account for time-dependent exposure to risks of marriage and cohabitation we employ a discrete-time approach (Allison 1982). The multinomial discrete-time approach has been successfully applied in analysis of marriage and cohabitation (e.g., Berrington and Diamond 2000; Brown and Snyder 2006; Wiik 2009). In our model, each respondent's exposure to risk of marriage or cohabitation is measured in months starting from his/her 15th birthday until the time of entry into partnership or the time of interview, when the cases are censored. The competing events are entry into cohabitation and entry into registered marriage (without prior cohabitation). The model therefore estimates the monthly probability of each event relative to remaining unmarried and not cohabiting. Specifically, it estimates the log odds of an event type j , where $j = 2$ or 3 (marriage or cohabitation), versus no event ($j=1$, remaining unmarried and not cohabiting) for an individual i at time t and can be specified as follows:

$$\log \left[\frac{\Pr(Y_{it} = j)}{\Pr(Y_{it} = 1)} \right] = \beta_{j0} + \beta_{j1}x_{ji} + \beta_{j2}z_{jit} + \beta_{j3}w_{jit},$$

where x_{ji} are time-invariant covariates representing ethnic category, gender, religiosity, and mother's education; z_{jit} are time-varying covariates representing area of residence, migration, school enrollment, work status, pregnancy, and premarital birth; and w_{jit} is a function of time represented by age. β_{j0} , β_{j1} , β_{j2} , and β_{j3} are unknown parameters to be estimated.

Before we present and discuss the results of our analysis, some cautionary notes on the limitations of our data and statistical model are in order. First, there is a possibility of misreporting the type of union—registered vs. unregistered. Although unregistered union (citizen marriage, cohabitation) is a well familiar concept in Kyrgyzstan, it is a much less standardized arrangement than registered marriage and therefore different individuals may construe it somewhat differently. Thus, although unregistered union conventionally implies co-residence, some respondents could have misconstrued permanent sexual partnership without continuous sharing of a residence as unregistered union. Because of the relative vagueness of the notion of unregistered union, the reporting of the timing (year and, especially, month) of entry into cohabitation may also be less accurate than that of the timing of official marriage (cf. Hayford and Morgan, 2008, for the U.S.). A related limitation is that the data do not allow us to be fully sure whether current first marriages started as marriages or were preceded by cohabitation. Given the young age of the sample and generally short durations of reported unions, we believe that the resulting bias is not large. Nonetheless, to estimate the magnitude of the bias, we run simulations by randomly assigning prior cohabitations to reported marriages. The results from these simulation models are remarkably similar to those obtained with the original data described below, suggesting that the bias resulting from possible underreporting of premarital cohabitation is negligible (see Appendix). It is also possible that misreporting of marriage and cohabitation somehow varied by gender (cf. Vishnevsky 2006, p.100, for Russia). Importantly, while the issues listed above are of concern, we have no reason to believe that any misreporting varied systematically across the three ethnic groups.

Another important qualification pertaining to the nature of marriage and cohabitation in the study context is that we treat entry into both states as matters of choice (made by respondents and/or by their relatives). In reality, this, of course, may not be true in the case for cohabitation as some people may settle into that option because formal marriage is implausible or impossible for various reasons.

With regard to the statistical model, one important caveat is that like in most studies modeling risks of transition to marriage vs. cohabitation, we presume that the two risks are mutually “noninformative,” i.e., that risks of entry into formal marriage are completely independent of risks of entry into cohabitation. This presumption cannot be tested and strictly speaking may not be plausible, but we assume that whatever bias that possible informativeness of marriage and cohabitation may introduce is not large and, most importantly, not ethnic-specific.

Results

Table 1 presents the descriptive breakdown of types of first union by ethnic group, residence, and gender for all survey respondents regardless of age.⁸ The ethnic groups align in the predicted order in regard to cohabitation, with Europeans displaying the highest share and less-Russified Kyrgyz the lowest. The ethnic ordering with respect to marriage, however, is not as clear-cut: while less-Russified Kyrgyz exhibit by far the strongest proclivity to marriage, the proportion of married among more-Russified Kyrgyz is lower than even among Europeans. It can be recalled that the census data pointed to similarities in age at first marriage between Kyrgyz and Europeans. Table 1 shows that such similarities are contingent on the degree of Russification among the Kyrgyz. The gender breakdown of the proportions of married also

⁸ Because the percentages in Table 1 are not life table estimates and do not account for censoring, they should not be interpreted as levels. Table 1 therefore provides a general overview of the ethnic differences for which we then test more rigorously in the multivariate analyses.

reveals an interesting variation. With respect to marriage, all three categories had a similar gender gap, reflecting differences in age at first marriage between men and women. However, while the proportion married was nearly identical among European and more-Russified Kyrgyz women, men of these two groups differed considerably. In fact, the share of formally married European men was closer to that of less-Russified Kyrgyz men than to that of their more-Russified co-ethnics. At the same time, European women had the highest share of cohabiters among all combinations of ethnic identity and gender segments, whereas European and more-Russified Kyrgyz men had identical rates of unregistered union. Finally, contrary to our expectation, the ethnic differences in cohabitation were most noticeable in rural areas, where less-Russified Kyrgyz stood in contrast with the other two groups. In marriage, however, the sharpest contrast was in Bishkek, but there again the very high proportion of married among less-Russified Kyrgyz stood out.

Table 1 about here

Figures 1a and 1b depict unadjusted ethnic-specific survival probabilities for marriage and cohabitation, respectively. The marriage graph shows a clear divergence of ethnic-specific trends starting from around age 17. In congruence with our hypothesis, less-Russified Kyrgyz display a consistently higher probability of marriage than the other two groups. Interestingly, defying our expectations, the probability of entry into registered marriage is generally lowest among more-Russified Kyrgyz, which again points to the roots of the trends in age at first marriage revealed by the 1999 census. However, when compared to less-Russified Kyrgyz, the curves of survival to marriage among Europeans and more-Russified Kyrgyz are close to each other, converging around age 26 and crossing over toward the end of the observation span. Thus by the end of that span a slightly higher proportion of more-Russified Kyrgyz than Europeans entered into a marriage, which is against our hypothesis.

Figures 1a and 1b about here

Figure 1b illustrates the overall low prevalence of cohabitation in Kyrgyzstan (note the difference in the scale from the previous graph). Yet it also makes clear that the probability of entry into unregistered union is consistently higher among Europeans than among the two Kyrgyz groups. The differences between the two Kyrgyz groups expected by our theory are present only between ages 23-27 (we do not display survival probabilities beyond 150 months since fifteenth birthday, when the number of individuals still at risk drops considerably and the data noise increases). It should be noted that the differences between the three curves are only marginally significant ($p \leq .10$).

The results of the multivariate discrete-time multinomial model, summarized in Panel A of Table 2, convey generally the same pattern as we saw in the bivariate distributions in Table 1, which partially confirms our main hypothesis about ethnic differences in the transition to first union. As we expected, the probability of entry into cohabitation is, *ceteris paribus*, significantly higher among Europeans than among less-Russified Kyrgyz, while the opposite is true for the probability of entry into marriage. More-Russified Kyrgyz display a similar pattern, although the difference from less-Russified Kyrgyz in the probability of entry into cohabitation is only marginally significant ($p \leq .10$). In comparison, the gap between the two Kyrgyz groups in the probability of entry into marriage proves to be even larger than that between less-Russified Kyrgyz and Europeans. The pattern is also reminiscent of the one in the bivariate distribution and fits well with the marriage data from the 1999 Census that we reviewed earlier.

Table 2 about here

To test Hypotheses 2 and 3 we fit the same model but include interactions of ethnicity with area of residence and gender, respectively. The ethnicity-area interaction terms are not statistically significant, suggesting that ethnic patterns of entry into marriage are fairly uniform across the three types of area of residence and thus disproving our hypothesis (we do not present these results here, but they are available upon request). The model with interaction terms for ethnicity and gender, on the other hand, does show some significant effects that are worthy of notice. The results of this model are presented in the second panel of Table 2. These results suggest that among men, Europeans are significantly less likely to enter cohabitation than are less-Russified Kyrgyz. The interaction term for Europeans and gender is not statistically significant, which does not support our hypothesis that ethnic differences in the probability of entering cohabitation would be greater among women. The results for the probability of entry into a registered marriage are more in line with what we hypothesized: the difference between less-Russified Kyrgyz and Europeans is trivial among men but rather substantial among women. However, what is perhaps most interesting is the position of more-Russified Kyrgyz vis-à-vis the two extremes of the ethnic continuum. For entry into cohabitation, this group seems to gravitate more toward Europeans among men but toward their less-Russified co-ethnics among women. In contrast, for entry into marriage, more-Russified Kyrgyz men are much more distant from their less-Russified counterparts than are Europeans, while among women they are indistinguishable from Europeans. It should be noted that for both outcomes the differences between Europeans and less-Russified Kyrgyz were not statistically significant regardless of gender (these results are not shown but can be provided upon request). We should also note that regardless of ethnicity and other factors, women were more likely to enter both registered and unregistered union than were men, which is probably due to gender differences in age at union formation. Figure 2 presents graphically the odds ratios for the three ethnic groups computed from the parameter estimates from the two models presented in Table 2. These odds ratios should be interpreted in conjunction with the significance level of the

corresponding parameter estimates for the main effects of ethnicity and the effects of the ethnicity-gender interaction terms.

Figure 2 about here

Conclusion

The recent literature on trends in marriage and fertility in Central and Eastern Europe has moved away from an earlier simplistic focus on the disruptive role of the post-Communist economic crisis to a more sophisticated approach stressing the acceleration of ideational changes under the conditions of the transition to market economy and liberal democratic institutions (Frejka 2008; Sobotka 2004; Sobotka and Toulemon 2008). However, in multi-ethnic Central Asian settings, where the transition to both market and democracy has been faltering, ethnic groups with different demographic baggage, cultural assets, and political stakes may find themselves differently positioned in this transition, and these different positioning may result in considerable variations in entry into marriage and cohabitation, and possibly in other demographic outcomes, across these groups. Although our data do not allow us to trace the long-term ethnic-specific trends in union formation in Kyrgyzstan, they did yield an instructive snapshot of these variations in the beginning of the 21st century.

Our analysis detected considerable ethnic differences in transition to first union. For entry into cohabitation, the differences between Europeans and less-Russified Kyrgyz, the two categories that we viewed as most distinct from each other demographically, culturally, and politically, fully agreed with our expectations. However, with respect to marriage, the anticipated difference between Europeans and less-Russified Kyrgyz was clearly present only among women whereas among men the two groups were statistically indistinguishable. It is tempting to look for connections between Europeans' gender pattern of entry into marriage and the female marriage squeeze among that group that might have resulted from disproportionate

outmigration of Europeans men. Thus while Europeans, among whom the momentum of the second demographic transition is accelerated by excessive cultural and political vulnerability, may be in general under the strongest pressure to postpone marriage, such pressure on European men may be countervailed by their expanded opportunities in the marriage market. Unfortunately, our data are insufficient for a rigorous analysis of the association between age-sex structure and union formation choices and outcomes of Europeans in Kyrgyzstan.

Whereas the differences between the two extremes of the ethnic continuum generally supported our main hypothesis, the results for more-Russified Kyrgyz, the group that we construed as a socio-cultural and demographic middle ground, are less straightforward. This group did fall between the other two with respect to the probability of entering cohabitation. Yet the anticipated ordering of the three groups was present only among women, while among men more-Russified Kyrgyz seemed even more likely to enter unregistered union than Europeans. We are inclined to seek explanations for this gender pattern in the social and cultural meaning of cohabitation in Kyrgyzstan. Unregistered union, which has become demographically noticeable in Kyrgyzstani society only after independence (Denissenko, 2005), represents a radical innovation in union formation choices reflecting rapid liberalization in sexual matters. Europeans as a group most advanced in the second demographic transition, are in general most adept at such a revolutionary innovation. Even among Europeans, however, women face higher barriers toward cohabitation than do men. Among more-Russified Kyrgyz, a group that is culturally intermediate between Europeans and less-Russified Kyrgyz, the propensity toward cohabitation is not surprisingly even more gendered for, like in most culturally transitional groups, barriers to radical behavioral innovation are much steeper for women than they are for men. In comparison, change in the timing of registered marriage is usually a more incremental response to evolving cultural and socioeconomic pressures. Although this process was certainly hastened by the dramatic shifts in livelihoods and opportunities that occurred after the collapse of the Soviet system, it does not involve cultural and behavioral breakthroughs comparable to

those that facilitate entry into cohabitation. As a result, more-Russified Kyrgyz women showed greater similarity with Europeans in the probability of entry into registered marriage. The men of the two ethnic groups would have also been much similar to each in that respect had it not been, as we surmised, for the sex imbalance among Europeans of marriageable ages. We admit, however, that in the absence of more sensitive data these insights remain tentative. What can be asserted with greater confidence is that more-Russified Kyrgyz stood in general closer to Europeans than to their less-Russified counterparts, underscoring the distinction that cultural Russification has created among Kyrgyz. Of course, it should be kept in mind that the two segments of Kyrgyzstan's titular ethnic group are not separate ethnicities and hence the dichotomous dissection of Kyrgyz that we used in this study cannot capture all the shades and degrees of Russian-Soviet cultural influence.

Our analysis has focused on the young generation of Kyrgyzstan's population. Unlike their parents, this generation has come of age in the independent era, when Soviet-time norms and aspirations have been increasingly questioned. For this generation, marriage is no longer the only path to create a lasting emotional partnership, assure regular sex life, or to secure housing as it largely was for older generations. Although marriage still remains a *sine qua non* for complete social self-realization among most members of this generation and the relative economic stabilization has reversed the early post-Soviet plunge in marriage rates (National Statistical Committee 2006, p. 232), nuptiality scenarios become negotiable as they increasingly include postponement of marriage, transition to marriage through cohabitation or unregistered religious union, and even cohabitation as an alternative to marriage. These processes are universal and replicate the trends that took place earlier in North America and Western Europe (Cherlin 2004; Rindfuss and VandenHeuvel 1990; Smock 2000) and more recently have been occurring in other settings (e.g., Bradatan and Kulcsar 2008; Jones 2005; Sobotka and Toulemon 2008). If other countries' experience is of any guidance, retreat from marriage continues unabated even when the economic times are good (Lichter et al. 2002; Zakharov

2008) and the recent recovery of marriage rates in Kyrgyzstan is unlikely to reverse the long-term trend, especially in the context of the current economic downturn. Yet, whatever the shape and tempo of future trends in union formation will be, they are likely to exhibit the culturally rooted and politically constrained ethnic patterns that our study has helped to unveil.

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Figure 1a: Transition to first marriage by ethnicity (survival probabilities)

Note: The curves are significantly different at $p < .01$ (log-rank test).

Figure 1b: Transition to first cohabitation by ethnicity (survival probabilities)

Note: The curves are significantly different at $p < .1$ (log-rank test).

Table 1. Descriptive statistics: type of first union by ethnicity, gender and area of residence (percent)

Ethnic group			Cohabitation	Marriage	Not in union
Europeans	Gender	Male	7.3	19.8	72.9
		Female	13.9	33.6	52.5
	Area of residence	Bishkek	8.0	25.7	66.3
		Town	8.6	29.5	61.9
		Village	13.1	24.9	62.0
	All		10.4	26.3	63.3
More-Russified Kyrgyz	Gender	Male	7.3	11.8	80.9
		Female	8.6	33.3	58.1
	Area of residence	Bishkek	6.2	20.6	73.2
		Town	7.7	30.8	61.5
		Village	12.1	23.2	64.7
	All		8.0	24.0	68.0
Less-Russified Kyrgyz	Gender	Male	3.9	23.3	72.8
		Female	7.1	54.2	38.8
	Area of residence	Bishkek	4.7	52.9	42.4
		Town	6.6	31.4	62.0
		Village	5.2	37.8	57.0
	All		5.5	39.0	55.5

Notes: Area of residence refers to respondent's residence at the time of entry into marriage/cohabitation; if unmarried/not cohabiting, area residence as at the time of the survey.

Table 2: Discrete-time multinomial logistic regression of entry into marriage vs. cohabitation (parameter estimates) for the models with main effects only (Panel A) and with ethnicity-gender interactions (Panel B)

	A		B	
	Cohabitation	Marriage	Cohabitation	Marriage
Ethnicity				
Europeans	0.714 **	-0.650 **	0.934 *	-0.187
More-Russified Kyrgyz (Less-Russified Kyrgyz)	0.468 +	-0.744 **	1.040 *	-0.558 *
	—	—	—	—
Sex				
Female	0.687 **	1.031 **	1.114 **	1.353 **
(Male)	—	—	—	—
Interactions				
Europeans*Female	n/a	n/a	-0.350	-0.707 **
More-Russified Kyrgyz*Female	n/a	n/a	-0.920 +	-0.295
Current age	0.008 **	0.011 **	0.008 **	0.011 **
Current residence				
Town	0.259	0.131	0.258	0.113
Village	0.422 +	-0.004	0.423 +	0.003
(City)	—	—	—	—
Migration experience				
Migrated at least once	0.475 *	0.159	0.486 *	0.170
(Never migrated)	—	—	—	—
School enrollment				
Enrolled	-1.310 **	-0.933 **	-1.303 **	-0.931 **
(Not enrolled)	—	—	—	—
Work status				
Not working	-0.029	-0.163	-0.035	-0.165
(Working)	—	—	—	—
Religiosity				
Not religious	0.062	-0.057	0.066	-0.096
(Very or Somewhat)	—	—	—	—
Pregnancy				
Yes	2.315 **	3.035 **	2.3 **	3.029 **
(No)	—	—	—	—
Premarital childbirth				
Yes	2.054 **	1.960 **	2.008 **	1.899 **
(No)	—	—	—	—
Mother's education				
Incomplete higher or above	0.327	-0.051	0.333	-0.069
Secondary or below	0.625 **	-0.269 *	0.631 **	-0.283 *
(secondary special)	—	—	—	—
-2 Log-Likelihood	6494.5**		6482.9**	
Person-months	109862		109862	

Notes: () reference category; significance level: + $p \leq .10$, * $p \leq .05$, ** $p \leq .01$

Appendix

To estimate a potential bias stemming from uncertainty about whether the reported marriages were preceded by cohabitation, we carried out the following simulation exercise. We randomly selected a fraction of those reporting their first union as a registered (*zags*) marriage in each of the three ethnocultural categories separately and changed their first union type to unregistered cohabitation. The onset of the union for these respondents was shifted back two years as unregistered unions were assumed to have occurred on average two years before *zags* registrations. The fractions of currently married respondents who are assigned pre-marital cohabitation corresponded to the shares of respondents in unregistered unions at the time of the survey in each ethnocultural segment—five, eight, and nine percent among less-Russified Kyrgyz, more-Russified Kyrgyz, and Europeans, respectively. These respondents were selected through simple random sampling without replacement. In total, the type and timing of first union was changed for 35 respondents: 10 less-Russified Kyrgyz, 8 more-Russified Kyrgyz, and 17 Europeans (out of 182, 98, and 178, respectively, currently married through *zags*). We then fitted the same models as presented earlier. We also fitted models in which the fraction of currently married respondents who were assigned pre-marital cohabitation was same for the all the three ethnocultural categories and equaled the average percent of unregistered unions in the sample (about 7 percent). The results for the two approaches are presented in the table below under Model A and Model B, respectively. As can be seen, the results are remarkably similar to those obtained with the original data (see Table 2), suggesting that the bias resulting from possible underreporting of premarital cohabitation is negligible.

	Model A				Model B			
	Cohabitation		Marriage		Cohabitation		Marriage	
Ethnic group								
Europeans	0.721	**	-0.685	**	0.730	**	-0.664	**
More-Russified Kyrgyz	0.452	+	-0.756	**	0.457		-0.751	**
(Less-Russified Kyrgyz)	—		—		—		—	

Notes: () reference category; significance level: + $p \leq .10$, * $p \leq .05$, ** $p \leq .01$. Controls included are same as in Table 2 (not shown).