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Nuptiality in Soviet and post-Soviet Central Asia

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Abstract

This study analyzes nuptiality patterns in three Central Asian countries—Kazakhstan, Kyrgyzstan and Uzbekistan—over two decades preceding and one decade following the dissolution of the Soviet Union using census and Demographic Health Survey data. Although marriage remained universal through the end of that period, marriage age increased and for younger cohorts marriage rates declined considerably. Marriage age began to increase in the years following independence and there are no signs of any reversal. Within these countries marriage rates showed significant variation by educational achievement, and a much smaller variation by rural-urban residence. In Kazakhstan, ethnic differences in marriage age—Russians marrying earlier than the native Kazakhs—began to narrow. During the years of social, political and economic turmoil that preceded and followed independence, marriage rates increased dramatically followed by a steep decline in Kyrgyzstan and Uzbekistan but not in Kazakhstan. Explanations of these trends are proposed based on the literature on demographic adjustments to social crises and the specifics of Central Asia's historico-cultural and socioeconomic contexts.

Keywords: Marriage; Ethnicity; Societal Crisis; Central Asia; Former Soviet Union;

Introduction

Marriage patterns in Asia have changed dramatically in the last half century. Thus, in many South-East Asian countries, especially in their urban centres, universal marriage for women seems to be crumbling, and non-marriage gaining prominence (Jones, 2005). Among other countries in Asia, notably in China and India, though universal marriage still remains the norm, marriage age has increased considerably (Das & Dey, 1998; Feng & Quanhe, 1996). In the Middle East, marriage rates have declined (Singh & Samara 1996). The reasons for these changes are varied: state policy, improvements in women's education levels and labour force participation, weakening of traditional values, and the spread of western ideas and norms that place less emphasis on marriage.

Central Asia, a vast and unevenly populated region that until 1991 was part of the U.S.S.R., was traditionally characterized by universal and early marriage. But little is known about recent nuptiality patterns in the region. The region had a unique past—socialist modernization superimposed over agricultural and nomadic Islamic cultures—and a no less uniquely dramatic and complex transformation as the Soviet Union broke up. The economic downturn and political instability following independence were accompanied by both greater openness to western cultural influences and a revival of Islam. In this study, we examine whether these unique historical conditions and developments were mirrored in marriage patterns and trends. In particular, we want to establish if the dissolution of the Soviet Union and political independence of the former Central Asian Soviet Republics had any impact on entry into and age-specific prevalence of marriage (nuptiality). Whereas post-Soviet and post-Communist political, economic, and cultural transitions have been subjects of numerous studies, the demographic aspects of these transitions have received very little attention. Moreover, most demographic studies have focused on fertility. In this study, we examine whether the decline and collapse of the Soviet Union and the political and socioeconomic crises that followed were associated with trends in marriage. Given the economic and political crises that preceded and

followed independence of the Central Asian States in 1991, some sort of adjustments in marriage behaviour is to be expected. Possibly marriage rates could have declined in response to the economic crises which strained the financial ability of individuals to set up a new household. If economic crises were the only change that happened, then the avoidance of marriage may be seen as a rational response. But the changes in Central Asia were multifaceted: not only did the Central Asian states face economic pressures but also underwent dramatic social and political changes which could have made marriage response to crises more complex. Therefore, when looking at adjustments in marriage behaviour in response to crises it is necessary to keep in mind the various—and often mutually countervailing—aspects of the crises and their cumulative effect on individual decisions.

Three general scenarios may be anticipated: 1) Precipitous retreat from marriage. An acceleration of the secular decline in marriage may have been due to political and economic shocks and greater openness to western culture; 2) Stabilization or increase in marriage prevalence. This expectation is based on the assumption that re-traditionalization produced by rising influence of Islam may delay and even reverse the secular trends; and 3) No change associated with the post-Soviet transition. Under this scenario, we would expect to see Soviet-time secular trends to continue smoothly into the post-Soviet period.

To put late-Soviet and post-Soviet trends in marriage in perspective, we look at nuptiality over the last two decades of the twentieth century. Due to lack of relevant data, we limit our analysis to three of the five¹ Central Asian republics—Kazakhstan, Kyrgyzstan and Uzbekistan—and compare the nuptial patterns in these countries using the same type of data. Each has unique features: Uzbekistan (population 26.2 million), the largest, agricultural tradition with strong Islam, Kazakhstan (15.1 million) and Kyrgyzstan (5.1 million)—pastoralist traditions with “weak” Islam (Poliakov, 1992).

While interested in seeing which of these three scenarios fits best the reality of Central Asian nuptiality overall, we also are interested in differences across the countries of the region

as well as within-country differences such as those shaped by ethnicity, education, and place of residence (urban vs. rural). Ethnic differentials are particularly interesting to look at because some Central Asian countries have had a sizeable non-indigenous and non-Islamic population, whose demographic experiences and political and economic fortunes may have played out very differently from those of titular groups. In these countries, crises could have affected the material and psychological wellbeing of different ethnic groups in different ways and to different degrees. Marital adjustments may therefore be more pronounced among the ethnic groups more severely affected by the crises. Marital dynamics in Kazakhstan, the Central Asian country with a large non-titular population, may be particularly informative for such interethnic comparisons. Earlier analyses of fertility trends in that country have detected substantial differences in fertility patterns and timing of Kazakhs, on the one hand, and Russians and other groups of European origin, on the other (Agadjanian, 1999; 2002; Agadjanian, Dommaraju, & Glick, forthcoming; Agadjanian & Qian, 1997). Analyses of ethnic differences of transition to first marriage using survey data from mid-1990s also point to a higher probability of entry into first marriage among Russians and other Europeans in Kazakhstan, compared to the native group (Agadjanian, 1999). In this paper, we use more recent survey data to extend these analyses into the late 1990s.

Crisis and nuptiality

In the years preceding and following independence, the Central Asian states faced crises in various spheres. In the economic sphere the collapse of the centrally planned economy and the rupture of economic ties with the rest of the former Soviet Union lead to hyperinflation and a dramatic contraction of the industrial and agricultural production. Thus Inflation reached a high of over 1500 per cent in Kazakhstan and Uzbekistan by 1994 (Pomfret, 2003), and by 1995 GDP had shrunk to nearly half its 1990 level in Kazakhstan and Kyrgyzstan, and by about 80 per cent in Uzbekistan (Spoor, 1997). In the demographic sphere, life expectancy declined by as much as three and half years in Kazakhstan and about a half year in Kyrgyzstan for men

between 1989 and 2000 (Becker & Paltsev, 2004). Out-migration, especially of European-origin ethnic groups, peaked during the post independence period, with nearly 13 per cent of urban population and 18 per cent of ethnic Russians leaving Kazakhstan between 1990 and 1999; during the same period nearly 9 per cent of the population of Kyrgyzstan left (Becker et al., 2005). The cultural sphere saw greater openness to western influences but also the revival of Islam, manifested in a growth in observance of Islamic rituals and traditional practices, starting during the perestroika years of the late-1980s and intensifying in the years following independence (Tazmini, 2001).

Individuals respond to social, political or economic crises by adjusting their demographic behaviour has been noted in many contexts—most prominent examples of such responses include the adjustment of fertility timing in times of economic crises (Eloundou-Enyegue, Stokes & Cornwell, 2000), migration of individuals in response to crises (Becker et al., 2005), and changes to marriage patterns during political and economic crises (Palloni & Tienda, 1991). More recently, studies examining the demographic consequences of dramatic changes that have occurred in the ex-communist countries have found significant declines in nuptial and fertility rates. In East Germany, for instance, immediately after reunification fertility and marriage rates were halved (Alder, 1997; Eberstadt, 1994). The debate surrounding the nature and cause of this decline has focused on two general issues.

The first issue is whether the changes occurring are short-term or long-term adjustments. In East Germany, the changes in fertility appear to be long-term (Kreyenfeld, 2003), though substantial tempo effects were detected in fertility decline in Poland and Hungary (Philipov & Kohler, 2001). The second issue is whether these demographic changes reflect an acceleration of changes that started before the crises and which reflect the path towards assimilation into western demographic patterns—that is, demographic changes in the post-communist countries reflect delayed entry into western fertility and nuptiality patterns (Witte & Wagner, 1995). In the case of Russia, which was typically characterized by high rates of

marriage and low mean age at marriage until the late-1980s, has since witnessed an increase in non-marriage and an increase in marriage age (Avdeev & Monnier, 2000). Explanations for these changes in marriage patterns have been divided between the influence of crises (Cartwright, 2000) and late entry into second demographic transition (Avdeev & Monnier, 2000).

Data and methods

We use data from population censuses and from Demographic and Health Surveys (DHS) for the three countries. In the Soviet era, population censuses were conducted every ten years. The last all-Soviet decennial census was held in 1989. After that, Kazakhstan and Kyrgyzstan had their national censuses in 1999; no population census was conducted in independent Uzbekistan. DHS are nationally representative surveys conducted in over 75 countries with primary focus on fertility, reproductive health and child health (detailed information about the surveys can be found at www.measuredhs.com): Kazakhstan had two surveys—1995 and 1999—each surveyed all women age 15-49; for the analysis in this paper both surveys are pooled into a single dataset with a total of 8571 (3771+4800) respondents. Similarly the two surveys of all women aged 15-49 from Uzbekistan conducted in 1996 and 2002 are combined, with the final dataset containing 9878 (4415+5463) respondents. In Kyrgyzstan DHS was conducted only in 1997, again all women age 15-49, the sample size was 3848. All the surveys had questions about marital status, first marriage age, current age, current education level, and ethnicity.

An important limitation of DHS data for the study of marriage patterns must be acknowledged. DHS data do not allow one to accurately distinguish between age at entry to formal marriage and age at entry to informal union (cohabitation or unregistered marriage). Though cohabitation was relatively rare during the Soviet times, recent evidence suggests an increase in cohabitation in post-Soviet countries. In Russia, for instance, nearly 7 per cent of women were in cohabiting unions in 1994 and this was nearly double for women under the age of 20, though this increase in cohabitation may not be sufficient to offset the declines in

marriage rates (Avdeev & Monnier, 2000). From the available DHS data currently cohabiting unions as per cent of all unions could be calculated². About 4 per cent of all unions were cohabiting unions in Kyrgyzstan in 1997, about 2 per cent in Kazakhstan in 1999, and about 1 per cent in Uzbekistan in 2002. It appears that cohabitation is still relatively less prevalent in Central Asia, though it is impossible with the current data to estimate its growth during the last decade or to assess its prevalence among younger cohorts.

We use survival analysis techniques to estimate the time to first marriage. Survival techniques are necessary when some respondents may not have experienced the event of interest (e.g. marriage), by the time of the interview. These respondents are considered to be censored. In the presence of censoring standard regression techniques cannot be used because for the censored cases their full survival time is unknown (Box-Steffensmeier & Jones, 1997; Hosmer & Lemeshow, 1999). We use a discrete-time survival approach that measures time to event in discrete units (Allison, 1982; 1995: Chapter 7). We measure time to first marriage in years. A respondent is considered to be at risk of marriage starting from the year she turned sixteen till the year she married.³ If the respondent is not married by the time of survey, she is censored. In such cases, the risk period is between the year the respondent turned sixteen and the survey year. Each woman contributes one observation for each year she is at risk of marriage.

The discrete-time model used in the analyses can be expressed as follows:

$$\log \left[\frac{P_{it}}{1 - P_{it}} \right] = \alpha_t + \beta_1 x_i + \beta_2 z_{it}$$

$$\text{Where } \alpha_t = \alpha_0 + \alpha_1 t + \alpha_2 t^2$$

P_{it} : Conditional probability that woman i will marry at time t , given that she has not married before that time.

α_t : Function of time, treated as a quadratic function with intercept.

x_i : Time-invariant covariates representing education and childhood residence; β_1 : vector of corresponding coefficients to be estimated.

z_{it} : Time-varying covariates representing period in the form of dummy variables for years; β_2 : vector of the period coefficients to be estimated.

For Kazakhstan and Uzbekistan the data from two DHS surveys were combined into a single dataset and the above model was applied to the pooled data. For ease of interpretation, log odds of getting married in a particular year obtained from the discrete-time models have been transformed to probabilities of getting married in a particular year, holding other covariates constant at their mean value. The covariates included in the models are childhood residence, educational level (both are time-invariant), and woman's age (time-varying).

Trends in marriage rates and age at first marriage

We begin by presenting some recent trends in marriage rates for the three countries. These trends are summarized in Table 1. The per cent never married at younger ages appears to have increased for men and women in all three countries. In 1979, the proportion remaining unmarried at older ages was so low in Kazakhstan that it could be safely classified as a country with universal marriage. In 1989, the share of never married men and women in the age group 35-39 was less than 5 per cent and this increased to 8 and 7 per cent, respectively, by 1999. In Kyrgyzstan for the same age group, the increase for males and females was smaller, reaching to about 3.5 per cent for both groups by 1999. In Uzbekistan, the rates were around 2 per cent in 1989⁴. Both in Kyrgyzstan and Kazakhstan there have been a gradual increases in unmarried men and women— but whether this will continue to grow is difficult to extrapolate from the existing data. The trends in older ages, though useful, essentially represent the marital behaviour that took place ten or twenty years earlier and contribute little to the understanding of current marriage patterns. For this reason we focus on marriage patterns of younger age groups.

[Table 1 about here]

The most striking change in the last decade of the 20th century was occurring among younger age groups—those age 15-19 and 20-24. In Kazakhstan, between 1979 and 1989 the changes that took place for these age groups were modest compared to the rapid changes that took place between 1989 and 1999. During this time, the per cent unmarried by 20-24 increased by nearly 10 per cent for both men and women; and for men aged 30-34 the unmarried proportion increased by nearly 12 per cent. In Kyrgyzstan, the per cent unmarried at the younger ages 15-19 and 20-24 appear to have increased by nearly 10 per cent for men, but for women the increase was small. The growing proportion of unmarried persons means that the age at marriage is going to increase (whether it will lead to the demise of universal marriage pattern is yet to be seen). But given the rising proportion of unmarried men and women at younger ages, it is not possible for the age at marriage of this group to be lower than the previous group as there are simply more women/men who will be marrying at later ages and thus will increase the average age at marriage.

A more direct way of presenting the average age at marriage is by using Singulate Mean Age at Marriage (SMAM)⁵ for these time periods. SMAMs (also presented in Table 1) increased for both males and females, with more substantial increase seen for men in Kazakhstan—the increase was at least a year or more between 1989 and 1999, with women in Kyrgyzstan showing the smallest increase. Since SMAM is based on a synthetic cohort, it may not be robust during times of rapid changes in marriage patterns. A more robust measure in such situations is an intercensal estimate that is calculated based on “proportions single in hypothetical cohort exposed to marriage rates between two surveys or censuses” (United Nation, 1983: 227). The intercensal estimates for the period 1989-99 for men and women in Kazakhstan were 25.2 and 22.1 respectively, and for men and women in Kyrgyzstan were 24.6 and 21.5 respectively. Comparing the intercensal estimates with the mean of SMAM at endpoints (25.4, 22.9 for men and women in Kazakhstan and 25.5, 22.6 for men and women in Kyrgyzstan), it appears that the intercensal estimates are lower for both sexes in both countries than the mean value of the

endpoints. This indicates that men and women in these countries are marrying at a slightly younger age than would be suggested by observing SMAM at the endpoints.

Though marriage age has been increasing, divorce, using crude divorce rate (divorces per thousand people) as an indicator, seems to have remained stable during this period. Becker & Hemley (1998) report crude divorce rate to have remained relatively unchanged or to have slightly declined between 1989 and 1995 in the Central Asian republics. However, per cent divorced calculated from the 1989 and 1999 censuses for Kazakhstan and Kyrgyzstan show a slight increase in divorce, with the per cent divorced among women age 20-49 rising from about 7 per cent to 10 per cent in both countries. As Denissenko (2005) has noted, this increase could reflect the declines in remarriages among the divorced.

Yearly marriage probabilities for the three countries, smoothed as three-year moving averages, are presented in Figure 1⁶. As Figure 1 clearly demonstrates, trends in marriage probabilities after the late-1980s differed across the three countries. Thus, in Kyrgyzstan and Uzbekistan the rates of marriage increased sharply starting in 1988 and reaching a peak in 1992-3 before beginning to decline. This sudden spurt in marriage probabilities in response to the rapid changes occurring in the respective societies shows how individuals respond to crises by altering their demographic behaviour. Contrary to the situation in Kyrgyzstan and Uzbekistan, in Kazakhstan the crisis seems to have had a rather small and short-term impact on marriage rates, which hovered around 0.10 for greater part of the 1980's until the mid 1990's.

[Figure 1 about here]

The trends in predicted probabilities presented in Figure 1 differ from trends in crude marriage rates (CMR). In Figure 2, predicted probabilities of first marriage and CMR for 1989-1997 are presented. As could be seen, both indicators tend to agree for the most part on an increase in marriages between 1989 and 1991 and a decline in marriages in the mid-1990s. However, there are some discrepancies between the two data sources on the magnitude of post-1991 decline. While CMR indicates a rapid decline in marriages in all three countries after

1991, probabilities suggest a gradual decline in Uzbekistan and Kyrgyzstan, and stable patterns in Kazakhstan until 1996. The inconsistencies between the two sources are mainly due to the following three definitional differences. First, while probabilities consider only those who are at risk of marriage, CMR includes those not at risk (those already married) making it insensitive to past increases in marriages. Therefore, when marriages decline after a period of increase, CMR would indicate a steeper fall than shown by probabilities. Second, while CMR includes only formal marriages, probabilities presented include both formal and informal marriages. The decline in formal marriages in the 1990s was at least to some degree compensated by the rise in informal (consensual or non-registered) marriages. The increases in informal marriages reflect not only normative changes that favor cohabitation but also under-registration of marriages as result of financial hardship and other reasons. And third, while CMR includes both first marriages and remarriages, probabilities presented are for first marriages only. As was mentioned earlier in the paper, there appears to have been a steeper decline in remarriages than first marriages. While CMR captures this decline in remarriages, the probabilities do not since they are estimates for first marriages only.

[Figure 2 about here]

Rural/urban and educational differences in nuptiality

Demographic patterns in fertility and mortality in the Central Asian states differ greatly between rural and urban areas, partly as the result of the urban focus of Soviet modernization and the attendant neglect of the rural areas (Buckley, 1998). When it comes to marriage, rural areas in Central Asia appeared to have early marriage age for both men and women, except in Kazakhstan, the most urbanized and modernized country of the three, where the rural-urban difference is quite small (see Table 1). Early age at marriage in rural areas relative to urban areas is not unique to Central Asia, though. Such differences are a common pattern seen in most countries, including industrialized and urbanized countries like the United States. The explanations for the persistence of the institution of marriage (in countries where marriage rates

have declined) and early marriage age (in countries where marriage age has increased) in rural areas have typically emphasized the stronger hold of traditional values and norms that place greater emphasis on marriage and which are difficult to violate in rural areas because of the closed and shared nature of such societies (Albrecht & Albrecht, 2004; Brown & Snyder, 2006). Next, we examine whether the socio-political and economic crises acted differently in influencing marriage patterns in rural and urban areas.

Crises could have also affected rural and urban areas differently. Affirmation of national identity and culture during the period surrounding independence was more in accord with the existing traditional structure in rural areas and could have encouraged early marriages in rural areas. At the same time, it is also likely that marriage could have been perceived to be more beneficial during the times of insecurity in rural areas than in urban settings. Figure 3 presents smoothed marriage probabilities for each country by area of childhood residence⁷, controlling for education and age. As was expected, the figure shows that the probability of marriage increased in rural areas more than it did in urban areas in the period surrounding independence in all three countries. Rather than a conspicuous difference in response to crisis, the estimates indicate more or less similar adjustments in rural and urban areas.

[Figure 3 about here]

The one common pattern across the three countries appears to be the decline in marriage probabilities in the 1990s. In Kyrgyzstan and Uzbekistan, this decline started in the first half of the decade, whereas in Kazakhstan it began a few years later. The decline paralleled the post-Soviet economic crisis in the three nations. However, at least in Uzbekistan, the decline in marriage probabilities continued unabated even when the economic situation stabilized. That this decline was not a short-term response to the post-Soviet crisis but rather a long-term change in marriage patterns is also evident from the large per cent of women from younger cohorts remaining unmarried as revealed by the census data. Of course, without data for more

recent years it is impossible to make any firm claims, but it seems plausible to expect that this decline has continued.

Education, like rural/urban residence, has been shown to influence marriage rates. In the Central Asian republics, as seen from survival estimates, calculated using conventional life table method, charted in Figure 4, education delays marriage age considerably⁸. In all three countries, there is clear difference in age of entry into marriage by educational level, with the difference being more pronounced in Kyrgyzstan where women aged 20 with secondary education or less have survival estimate of .50 compared with .90 for women with higher or more education. These educational differentials in marriage age, as seen in other settings, could be due to the perceived or actual incompatibility of being a student and being married (Ikamari, 2005; Yabiku, 2005); and also because schooling may transmit new norms and behaviours that tend to lower the value of marriage (Kritz & Gurak, 1989).

[Figure 4 about here]

Ethnicity and nuptiality

The earlier observed lack of influence of crisis on marriage in Kazakhstan appears puzzling. The ethnic composition of the country and ethnic differences in age of marriage could hold some answers. Kazakhstan, like the other Central Asian republics of the former Soviet Union, has been a mixing ground for European and Asian cultural traditions since the nineteenth century. Today Kazakhstan has a large proportion of population constituted by Russians and other people of European origin, who for many decades leading to Kazakhstan's independence outnumbered the titular ethnic group. Despite living in proximity to each other, Russians and Kazakhs have maintained distinct patterns of fertility and abortion (Agadjanian, 1999; 2002). Specifically, Russians had lower fertility and higher abortion rates than Kazakhs. Given this unique situation of Russians in Kazakhstan, the break-up of the Soviet Union and the growing ethnic tension that preceded and followed independence could have been especially traumatic for that ethnic group.

Ethnic differences in proportion never married based on Kazakhstan's two last censuses are presented in Figure 5. The 1989 census data show that difference in marriage patterns for Russians and Kazakhs to be more pronounced at younger ages: contrary to what the conventional demographic wisdom would suggest, more "modernized" Russians were somewhat less likely than Kazakhs to remain unmarried. However, the difference declines with age and eventually disappears. This pattern suggests that both native Kazakhs and Russians are not much different when it comes to whether they eventually marry or not, but they differ in their timing of entry into marriage. The differences in marriage patterns that existed in 1989 disappeared completely ten years later as Russians in younger age groups began to delay marriage. In all, however, the proportion of never-married underwent only small changes.

[Figure 5 about here]

Figure 6 presents the predicted probabilities (controlling for age, education and childhood residence) of entry into marriage spanning more than two decades for the two ethnic groups under consideration. Confirming the pattern revealed by the proportion never married, Russians have higher probability of marriage (or lower age at marriage) than Kazakhs for most part of the last three decades until later part of the 1990s. For the moment not considering the fluctuations in the probabilities and the most recent declines in marriage probabilities, it could be said that Russians had the lowest marriage age and Kazakhs the highest age at marriage. The persistence of the difference between the Russians and the Kazakhs for such a long stretch of time can be explained by the unique situation of the Russians in Kazakhstan. As alluded earlier, the special place occupied by Russians in Kazakh society made it possible for Russians to be insular and maintain a distinctive pattern of early marriage and low fertility. In explaining this long standing ethnic differences in entry into marriage there is a need to consider the intersection of culture and the status of ethnic groups in the society.

[Figure 6 about here]

Looking at the marriage probabilities during the turbulent period, starting around 1987-8, it can be noticed that both Russians and Kazakhs show short-term fluctuations—though these fluctuations around this period appear to be minor. Indeed, for Russians the change—increase in marriage probabilities has been gradual starting in 1982 and continuing until the steep fall starting in 1993. In the last section, it was mentioned that ethnic differences in adjustment to crises are probably masking the general trend that showed only minor fluctuations during the time of independence. But it appears that there was no ethnic specific response either. At least for Kazakhstan there is no evidence to suggest that vulnerable groups adjusted to crises by adjusting their entry into marriage. Though demographic outcomes of minority groups have been linked to their social and political position, the particular demographic path taken by a group depends on how beneficial the action is in a particular context. Thus minorities in some contexts may find it beneficial to postpone marriage while in other contexts may marry early. In the case of Kazakhstan, it appears that marriage played a minor role during time of crises for both ethnic groups, suggesting that perhaps family formation itself was not seen as providing any benefit or acting as an detriment in times of crises.

Conclusions

The aim of this paper was to investigate recent trends in nuptiality in three Central Asian societies: specifically, the influence of crises associated with the collapse of the Soviet Union and the formation of new nations on marriage patterns. We found that among the young, i.e., those below the age of 24, marriage rates have declined considerably in the last decade of the 20th century in these countries. This decline could indicate a shift towards postponement of marriage or preference for non-marital unions (cohabitation or non registration of marriage) or both. These changes could reflect changing economic and social structure in these countries since their independence or the spread of new norms about marriage and sexuality. It has been argued that changes to demographic behaviour in post-Soviet countries could reflect a late adoption to European patterns of marriage and fertility (Avdeev & Monnier, 2000). With the

present data from Central Asia, it is impossible to establish whether the decline in marriage is a result of cultural or normative change or rather changes in structural (economic or social) conditions⁹.

In two Central Asian countries—Kyrgyzstan and Uzbekistan—marriage rates peaked around the time of their independence. In both these countries, between 1988 and 1992 women's chances of getting married increased considerably with rural areas experiencing a slightly greater increase than urban areas. This spurt in marriages suggests that during the uncertain time preceding and following independence, marriage may have been seen as providing security and stability. Agadjanian & Makarova (2003) in their analysis of marriage in Uzbekistan proposed that an increase in the probability of entry into first marriage among women around the time of the dissolution of the Soviet Union could be connected to the rapid inflation of dowry requirements which “may have put pressure on families to marry their daughters earlier—before any further escalation of these requirements could take place” (460). A late-Soviet and early post-Soviet rise of traditionalism, with its emphasis on early marriage, also could have played a role. Thus, though crisis is often viewed as depressing the occurrence of demographic events (marriage, fertility), at least in parts of Central Asia it seems to have hastened the entry into marriage. This paradoxical outcome illustrates the complexity of the post-Soviet crisis, in which economic decline, political instability, greater openness to western cultural models, and the revival of religious traditions closely intertwined. Whatever the reasons for the increase in marriages detected in Kyrgyzstan and Uzbekistan, it was short-lived and was followed by a steep decline in the post-independence period. A decline that, as far as the data permit us to establish, continued as the socioeconomic situation began stabilize in the late-1990s. This continuing decline may therefore represent a retreat from marriage typical of other parts of Asia and the developing world in general. Notably, however, probabilities of entry into first marriage among women in Uzbekistan at the turn of the century remained at levels not far

below those observed in the 1980s. In Kyrgyzstan, these probabilities, while inexorably declining, remained well above the pre-crisis levels as late as the second half of the 1990s.

Kazakhstan was different. There marriage rates remained quite stable between 1989 and 1995, in contrast with Kyrgyzstan and Uzbekistan. Marriage trends appear to diverge slightly by rural/urban area of residence in Kazakhstan—with urban areas witnessing an early decline starting around 1991 while marriage in rural areas stabilized around 1994. At the same time, Kazakhstan revealed a remarkable—and unexpected—pattern of ethnic differences: Russians, supposedly a more modernized segment of society, had consistently higher probability of entry into first marriage than did Kazakhs. A number of tentative explanations could be proposed for this pattern of ethnic differences. One explanation could be the persistence of Russian cultural practices and norms, as evidenced by the similarity between marriage patterns in Russia and among Russians in Kazakhstan. Marriage age in Russia, as among Russians in Kazakhstan, has traditionally been early and, in fact, declined during the second half of twentieth century until a recent upward movement beginning in the mid-1990s (Avdeev & Monnier, 2000). This unique Russian pattern of early marriage and low fertility could have persisted among the Russians in Kazakhstan given the limited intermingling of the Russians and the Kazakhs. It is also notable that neither group, despite their diverging stakes in the post-Communist transition, responded to the challenges of transition by significantly adjusting their nuptiality. Such imperviousness of union formation to the vicissitudes of the crisis contrasts markedly with adjustments in marital fertility (Agadjanian, Dommaraju, & Glick, forthcoming). The probabilities of entry into marriage began to decline toward the end of the observation period, when the worst of the crisis had already passed and socioeconomic recovery began. Finally, it is of note that the difference between the ethnic groups in marriage rates began to narrow in the very end of the observation span allowed by the DHS data.

The data at hand do not allow us to trace trends in marriage in the more recent past. In Kazakhstan, the region's most successful economy, there is scattered evidence of a certain

upturn in marriages in recent years, following the earlier decline (Becker & Seitenova, 2006). No comparable data are available for Uzbekistan or Kyrgyzstan but given the economic stagnation in both countries (aggravated by recent political turmoil in the latter), a recovery of marriage rates may have been more subdued. Whereas a clearer assessment of most recent marriage patterns in Central Asia will have to wait for new data, the nuptial history of most of the region in the last three decades of the twentieth century could be charted with considerable certainty. This history, with a remarkable stability of marriage patterns prior to the maelstrom of Perestroika and independence and often dramatic—and paradoxical—turns afterwards, mirrored the region's unique political, cultural, economic, and demographic trajectory.

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Table 1: Percent never married by age group and year

	All Men			All Women			Rural Men		Rural Women		Urban Men		Urban Women	
	1979	1989	1999	1979	1989	1999	1989	1999	1989	1999	1989	1999	1989	1999
Kazakhstan														
15-19	98.0	98.1	98.6	91.3	90.7	92.6	98.5	98.6	89.8	90.9	97.6	98.5	91.3	93.9
20-24	60.4	64.4	74.1	35.2	36.7	47.3	66.1	75.1	31.3	41.1	63.0	73.1	40.6	51.9
25-29	16.0	20.6	33.0	9.9	13.2	19.5	21.2	33.7	10.9	15.6	20.2	32.3	14.7	22.2
30-34	6.4	8.6	14.1	4.1	6.9	10.3	8.5	14.6	5.3	7.8	8.7	13.8	7.8	12.0
35-39	3.4	4.9	8.2	1.7	4.4	7.1	4.7	8.4	3.1	5.1	5.0	8.1	5.1	8.3
40-44	2.0	3.2	5.4	1.4	3.1	5.2	3.2	5.4	1.9	3.6	3.3	5.4	3.7	6.1
45-49	1.2	2.5	3.9	1.6	1.9	4.1	2.3	3.8	1.2	2.5	2.5	3.9	2.4	4.9
SMAM	24.1	24.6	26.1	21.8	22.3	23.4	24.6	26.1	21.8	22.6	24.4	25.8	22.6	23.7
Kyrgyzstan														
16-19	97.8	97.9	98.6	87.4	85.5	85.5	98.0	98.5	82.1	81.7	97.8	98.7	89.9	91.2
20-24	58.7	61.6	71.6	29.1	29.1	34.1	59.1	68.9	21.0	24.0	65.6	76.2	40.5	49.1
25-29	12.0	13.7	23.3	6.9	9.0	11.6	11.6	19.3	6.3	7.2	17.0	30.0	12.8	18.1
30-34	4.4	4.5	6.8	2.8	4.2	5.2	3.6	5.3	2.6	3.2	5.7	9.3	6.3	8.2
35-39	2.0	2.7	3.5	1.2	2.6	3.4	2.2	2.7	1.5	2.1	3.3	4.9	3.9	5.5
40-44	1.4	1.9	2.3	0.9	1.8	2.5	1.7	1.8	0.9	1.4	2.0	3.1	2.7	4.2
45-49	0.7	1.3	1.9	0.9	1.1	2.0	1.1	1.5	0.6	1.0	1.6	2.5	1.8	3.4
SMAM	24.7	24.9	26.0	22.2	22.4	22.7	24.6	25.5	21.6	21.7	25.3	26.7	23.4	24.1
Uzbekistan														
16-19	97.2	97.2		86.2	84.6		97.2		83.6		97.3		86.1	
20-24	57.7	56.0		29.1	25.9		50.4		21.5		63.5		32.5	
25-29	10.8	9.4		6.3	6.9		5.1		4.9		15.3		9.7	
30-34	3.4	3.1		2.3	3.2		1.2		1.8		5.5		4.9	
35-39	1.7	2.0		1.0	2.0		0.8		0.8		3.3		3.2	
40-44	1.1	1.4		0.8	1.4		0.6		0.5		2.2		2.3	
45-49	0.8	1.1		0.7	1.0		0.6		0.4		1.6		1.6	
SMAM	24.5	24.2		22.1	22.0		23.6		21.6		25.0		22.6	

Source: 1979 data from the USSR census reports for that year; 1989 data from U.S.S.R. Census (1996); 1999 data for Kazakhstan and Kyrgyzstan from United Nations (2006).

Figure 1: Predicted probabilities of first marriage for women by country (three-year moving average)

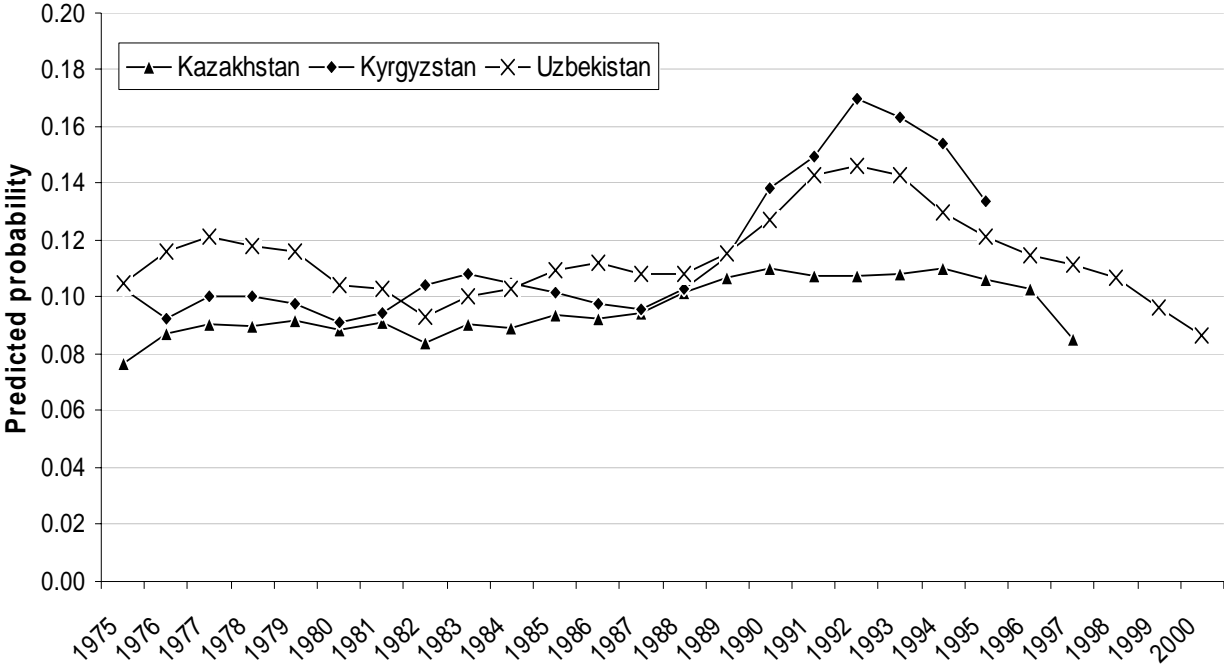
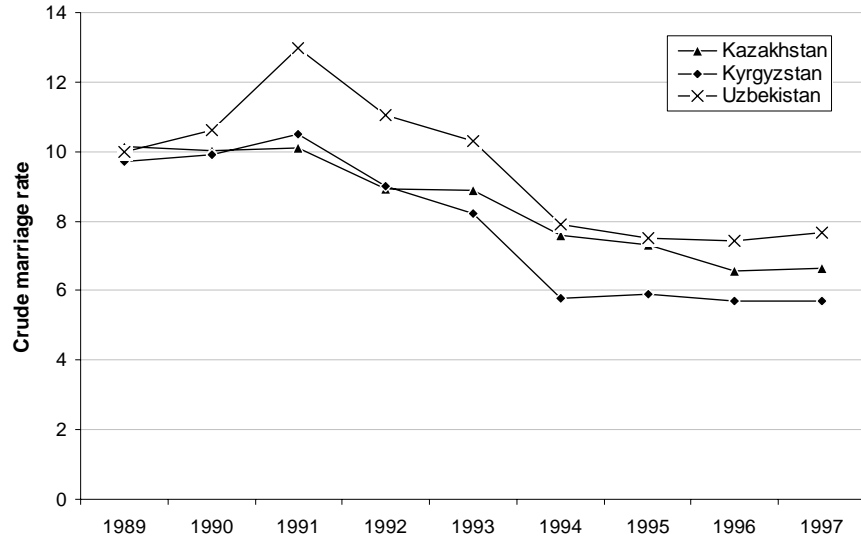
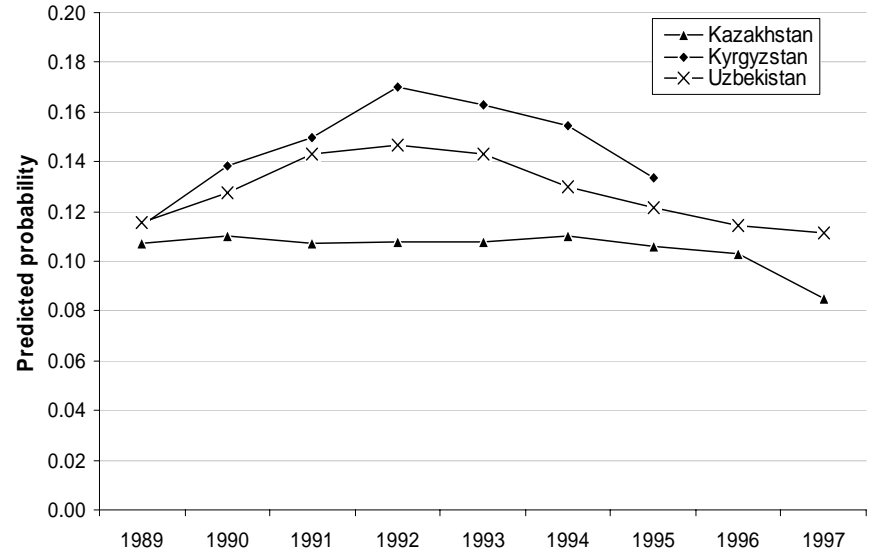


Figure 2: Crude marriage rates and predicted probabilities, 1989-1997

Panel A: Crude marriage rates



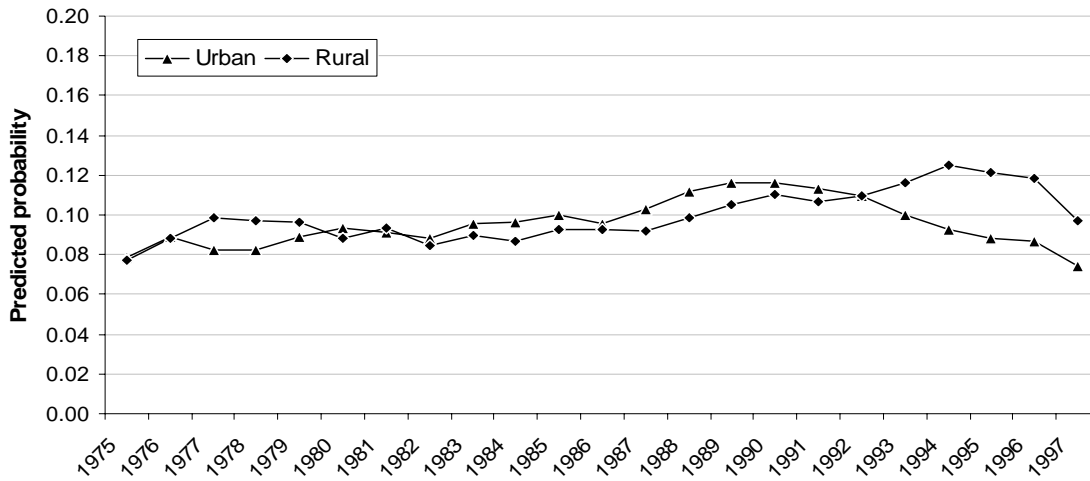
Panel B: Predicted probabilities from Figure 1



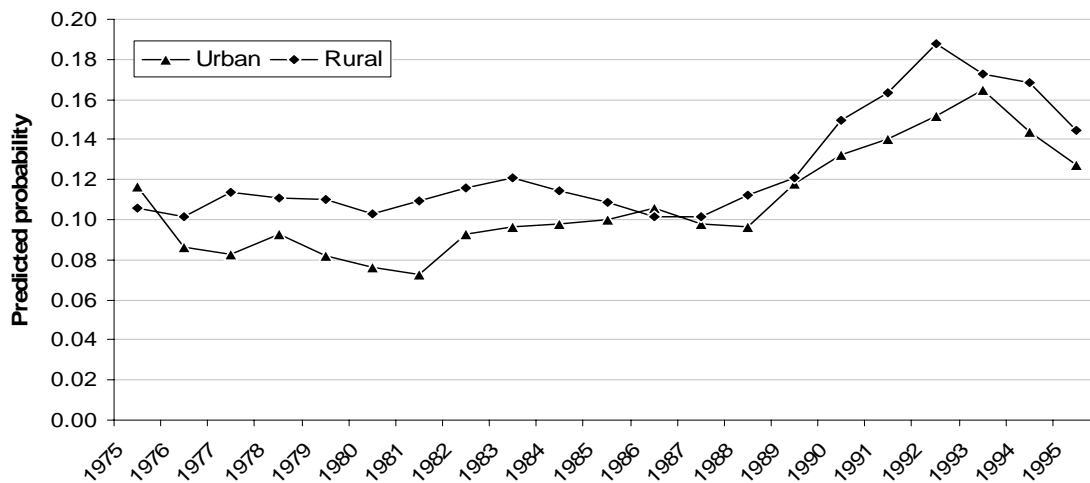
Source: UNICEF (1999: Statistical Annex)

Figure 3: Predicted probabilities of first marriage for women by rural/urban residence and country (three-year moving average)

Panel A: Kazakhstan



Panel B: Kyrgyzstan



Panel C: Uzbekistan

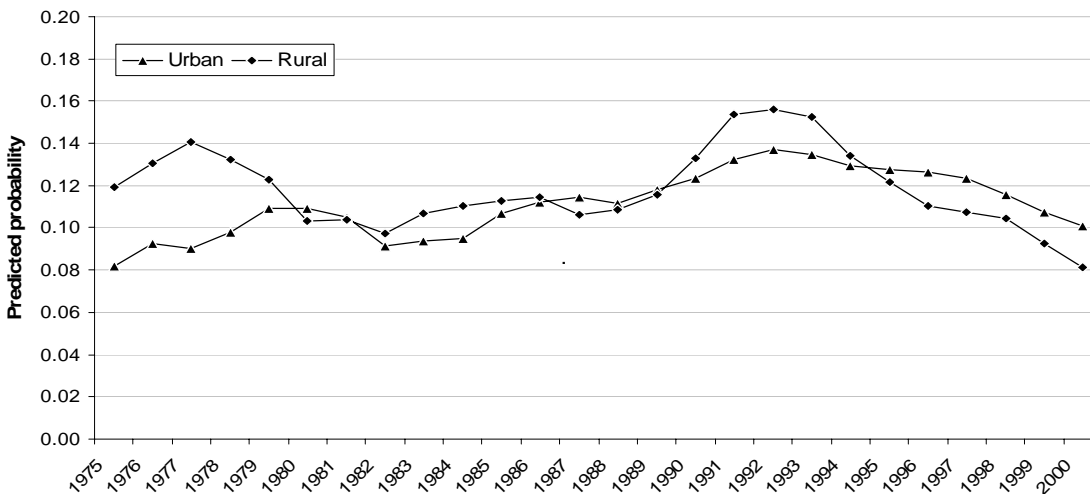
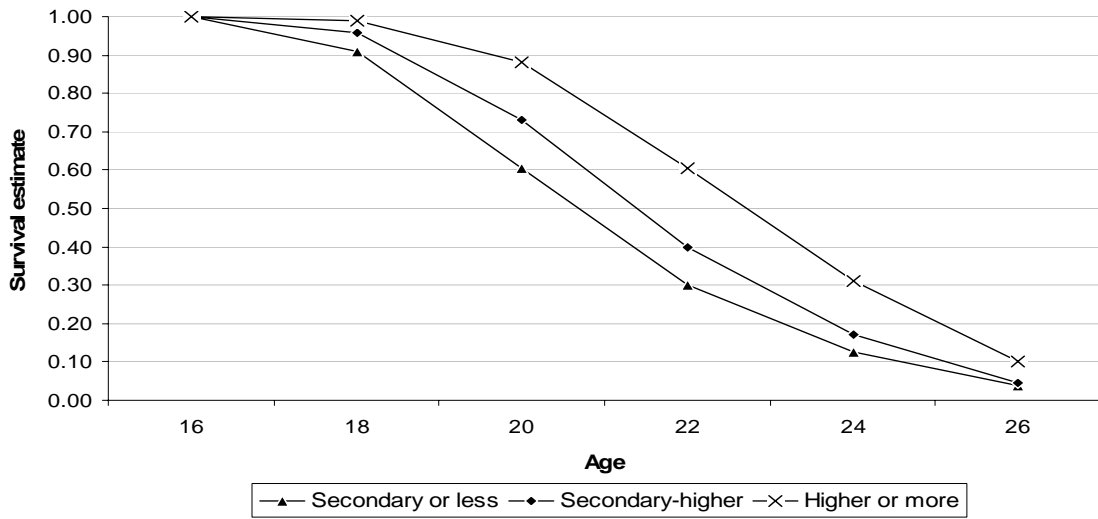
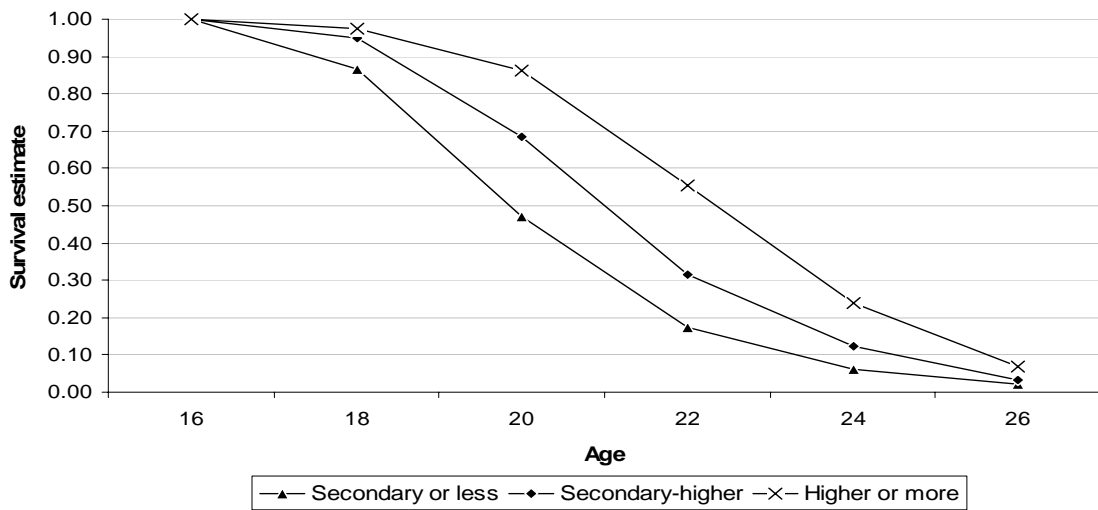


Figure 4: Survival estimates for first marriage for women by education

Panel A: Kazakhstan



Panel B: Kyrgyzstan



Panel C: Uzbekistan

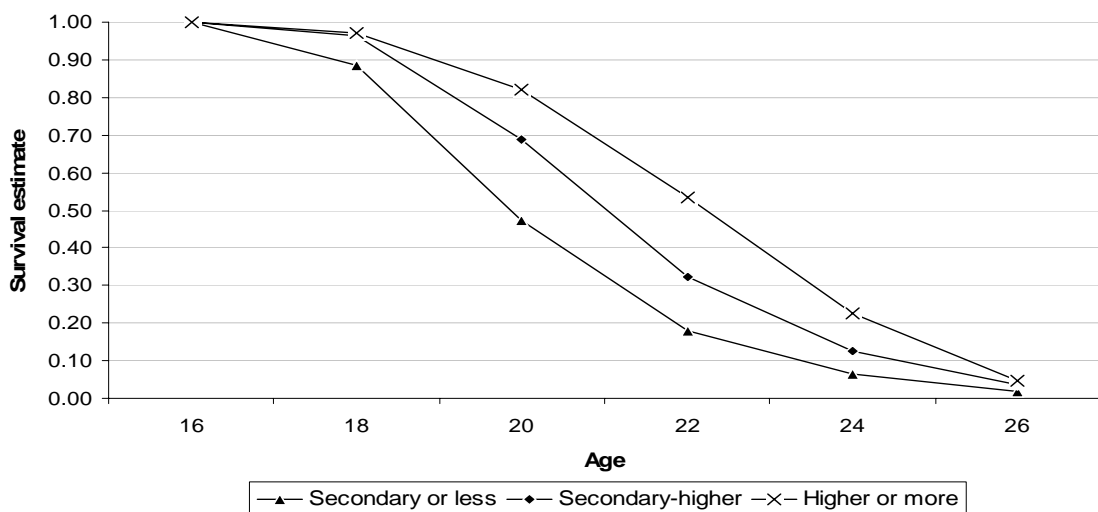
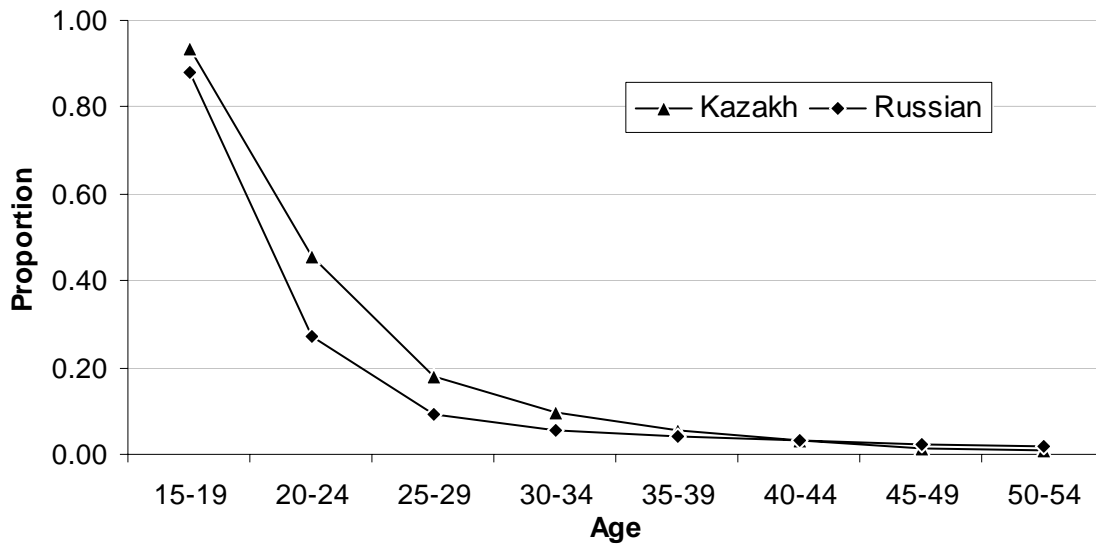


Figure 5: Proportion never married women by ethnicity and year, Kazakhstan

Panel A: 1989



Panel B: 1999

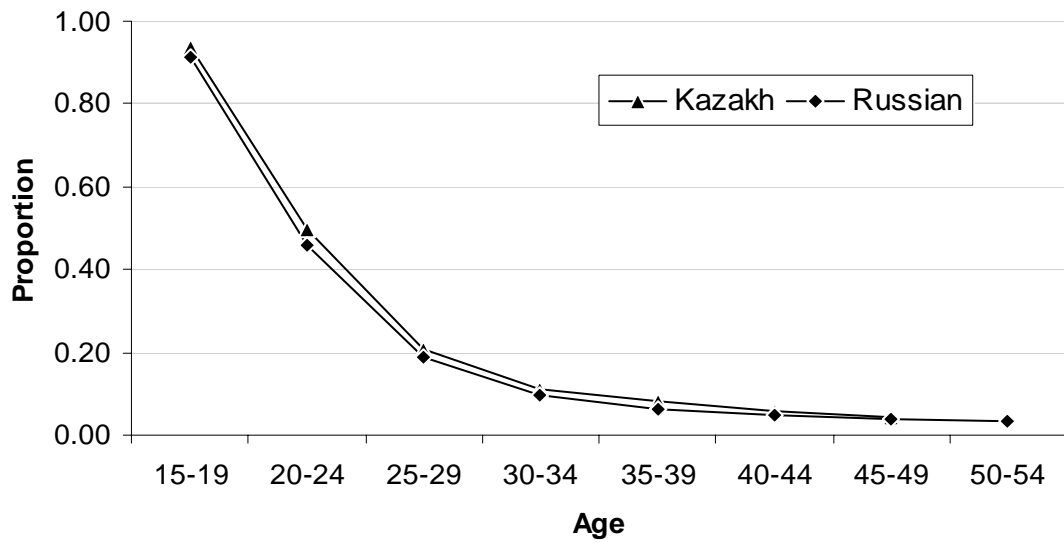
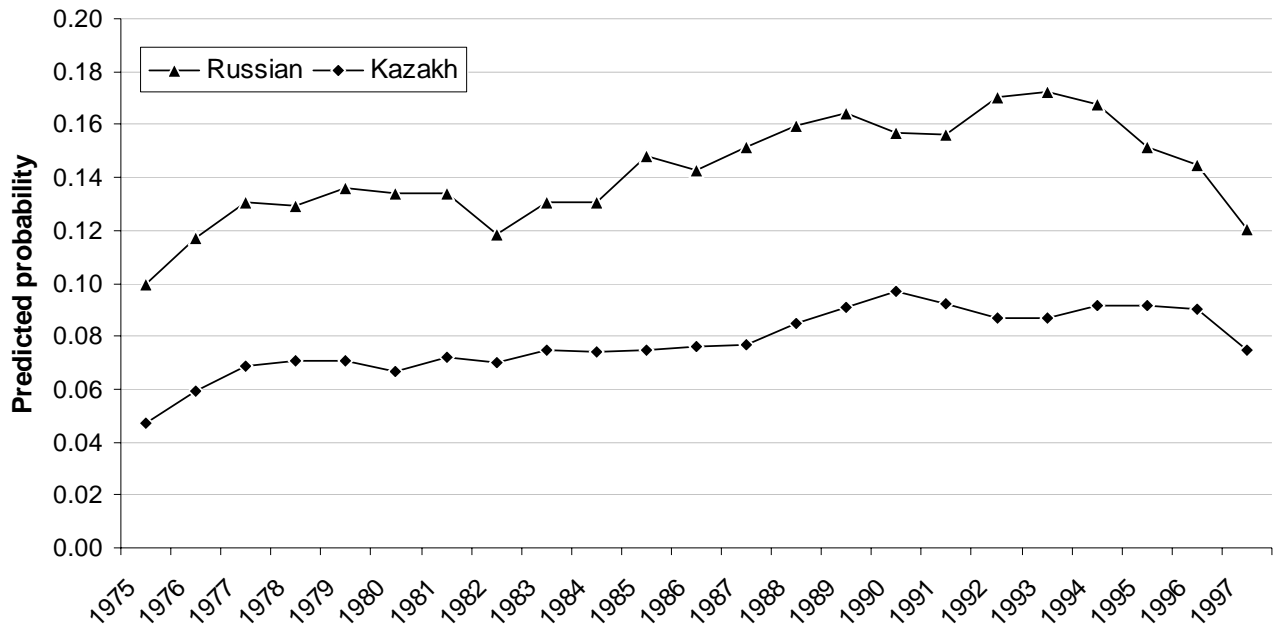


Figure 6: Predicted probabilities of entry into first marriage for women in Kazakhstan by ethnicity (three-year moving average)



Notes

¹ Comparable data from Turkmenistan and Tajikistan are not available.

² Currently living with a man/ (currently living with a man + currently married); currently refers to the year the survey was conducted.

³ In most former Soviet Republics, the official minimal marriage age was eighteen for both women and men, but in exceptional circumstances earlier marriages were also allowed. The marriage laws largely remained unchanged in Central Asia in the period covered in this study.

⁴ There has been no national population census in Uzbekistan since the USSR census of 1989. It is possible to calculate marriage rates from the 2002 Uzbekistan Demographic Health Survey data. However, given the oddities of the survey procedure, it would be inappropriate to compare age-specific marriage rates obtained from the survey data in 2002 with the 1989 rates obtained from the census data. Therefore, they are not presented in Table 1.

⁵ SMAM was proposed by Hajnal (1953), and could be interpreted as average number of years lived in the single state by those who marry prior to a certain age. In the present analyses, this age is assumed to be 50.

⁶ Regression estimates for this and other models in the paper are available from the first author upon request.

⁷ Two pieces of information about residence are available from the DHS: residence at age of 12 (childhood residence) and residence at the time of survey (current residence). Since we are interested in the influence of residence at the time of marriage current residence could be misleading, as married women could have moved after marriage, as is typically the case. As the risk of changing residence between age 12 and 16 (when the risk of marriage begins in our models) is quite negligible we have used childhood residence as the indicator for residence.

⁸ It should be noted that education was measured at the time of the survey and not at the time of marriage. Though it is not widespread, a sizeable per cent of women continue their education after marriage. For instance, in Kazakhstan about 10 per cent of women were still in school four years after their marriage (calculated from Kazakhstan DHS, 1999).

⁹ In this paper, we have not considered the influence of Russian emigration on marriage rates. If emigrating Russians and other people of European origin were predominately unmarried, their emigration would lead to a decline in overall marriage rates. Unfortunately, data on marital status of emigrants from Central Asian republics are not readily available, and we therefore cannot ascertain whether unmarried individuals indeed have been more likely to leave. However, there is some evidence to suggest the opposite—that Russian and other Europeans have been more likely to migrate as a family unit after marriage. In Kyrgyzstan, for instance, Agadjanian, Nedoluzhko and Kumskov (forthcoming) find that for Europeans migration intentions were more pronounced among those in marital unions, net of other factors.