Arranged and forced marriages in Kyrgyzstan: Persistence or change?

Abstract

In this study we analyze transitions to first marriage in Kyrgyzstan – one of the post-Soviet states of Central Asia. We use retrospective survey data collected in 2011/12 that contain full partnership histories of a representative sample of men and women in that country. We estimate hazard regression models to examine competing risks of arranged and non-arranged marriage among Kyrgyz and Uzbeks - Kyrgyzstan's two largest ethnic groups. For Kyrgyz we also analyze risks of marriage resulting from forced bride kidnapping. Our results indicate that nonsymmetrical gender roles manifest themselves in positive effects of employment on marriage for men and negative effects for women. They also show that the effects of educational attainment of bride and groom vary by marriage type. With respect to marriage dynamics our results demonstrate that contrary to a popular notion of a post-Soviet revival of traditional marriage practices, the risks of marriage resulting from bride kidnapping have declined since the collapse of the USSR. Finally, we observe that during the most recent period covered by our data marriage risks declined across all marriage types.

Introduction

The recent history of Central Asia has been marked by socialist socioeconomic modernization and cultural russification during the Soviet times, and spells of economic and political instability, along with a revival of pre-Soviet traditions and ethno-centered sentiments after the collapse of the Soviet Union in 1991. These processes have generated a unique mix of social and cultural forces that, in turn, have shaped family patterns. The breakup of the Soviet Union also brought to the region greater openness to both the Western and Islamic cultural influences which are likely to contribute to the diversity of norms, values, and attitudes regarding family formation.

The specific focus of our research is on arranged marriages. We study transition to first marriage among Kyrgyz and Uzbeks – ethnic groups that

account for 70.9% and 14.3%, respectively, of the population of Kyrgyzstan. Both groups are autochthonous to Central Asia.

For Kyrgyz and Uzbeks we estimate risks of arranged and non-arranged marriages. The category "arranged marriage" includes unions in which one of the spouses (mostly the wife) or both of them did not take part in the marriage decision. For ethnic Kyrgyz we additionally analyze transition to marriage resulting from forced bride kidnapping[1] (also referred to as 'forced marriage'), which is an extreme, violent, and gender discriminative form of an arranged marriage. We contrast forced marriages with marriages which did not involve bride kidnapping and with mock kidnappings (elopements). In the theoretical model of our paper forced kidnapping, elopement, and marriage without kidnapping represent the continuum of marriage types from the most to the least traditional.

We examine the incidence of arranged/forced and other marriages during the Soviet and post-Soviet periods and compare the effects of various individual characteristics across marriage types. Our general assumption is that the socio-economic and political turbulence following the disintegration of the USSR together with revival of native customs in the region could have changed the balance between different marriage types. Such changes also could have been disproportionate in some segments of the population. There are two general notions that guide our research. First, we expect that risks of arranged marriage and of forced kidnapping will be higher among more culturally traditional population segments. And second, we assume that the effect of respondents' economic status will vary across marriage types, particularly due to different degree of gender-role specialization.

Prior research and hypotheses

In the rich cross-national literature on union formation Central Asia has not received adequate attention. The research on nuptial behavior in this part of the post-Soviet world is scanty and often focuses on aggregate marriage dynamics (e.g., Denisenko 2005, Denisenko and Kalmykova 2011). A recent study on Kyrgyzstan compares propensities of marriage and

[1] The practice of "bride kidnapping" that can be of non-consensual (abduction) or consensual (elopement) nature in Central Asia prevail among populations with nomadic cultural tradition, which in our study are represented by ethnic Kyrgyz. Uzbeks are a sedentary agricultural group.

cohabitation (Agadjanian and Dommaraju 2011). In the case of Kazakhstan and, especially, Kyrgyzstan considerable literature has focused on emotional, ethical, functional, and gender implications of "bride kidnapping" (e.g., Amsler and Kleinbach 1999, Handrahan 2004, Kleinbach and Salimjanova 2007, Brusina 2008, Werner 2009, Borbieva 2012). This practice, whose apparent revival is believed to be propelled by post-Soviet economic crisis and deteriorating living standards, is often pictured by media as coupling men from poor families and young low-educated women. It is also said to be particularly common in rural areas where local practices and traditional lifestyles are more resistant to cultural modernization, although Kyrgyzstan's large-scale internal migration, mainly directed to cities, has apparently contributed to the urban-rural cultural fusion in general and to the regional spread of bride kidnapping in particular (BBC News 12 December 2012, EURASIANET 10 May 2013).

There has been no research on Kyrgyzstan that would specifically analyze individual characteristics of men opting for "kidnapping" and of women being kidnapped. Another issue that awaits rigorous examination in the region is that of arranged marriages without kidnapping. Research on Central Asia also lacks comparative analysis of ethnic-specific family formation among indigenous to the region populations; earlier studies have generally focused on contrasting Europeans with Asians (e.g., Agadjanian 1999; Agadjanian Dommaraju, and Glick 2008; Agadjanian and Makarova 2003; Nedoluzhko and Agadjanian 2010).

The main question to be answered by our study is whether the incidence of 'traditional' marriage types in Kyrgyzstan has changed after the collapse of the USSR. Thus several studies suggested an increase in non-consensual bride kidnappings after the dissolution of the Soviet Union (e.g., Amsler and Kleinbach 1999, Kleinbach 2003). There has been no research on arranged marriages which did not involve kidnapping in Kyrgyzstan, yet we suppose that the incidence of such marriages could have changed over time as well.

We also examine the effects of various respondents' characteristics on marriage propensities with a special focus on characteristics of socioeconomic status, such as employment and educational attainment, and ethnicity. Given the paucity of research on marriage in Central Asia we derive some of our

hypotheses from the literature on other settings which we adapt to the socioeconomic and ethno-cultural context of Kyrgyzstan. Thus our hypotheses on the effects of individual socioeconomic status are grounded in the specialization and trading model of marriage. We assume that the specialization of gender roles is particularly high in traditional (i.e., in forced or other arranged) marriages and thus the gender gap in the effects of socioeconomic status should also be wider in such marriages.

The literature connecting socioeconomic status with union formation suggests that men who are more capable of fulfilling the role of breadwinner are also more attractive as potential spouses; better education, stable employment, and high earnings are usually positively related to marriage propensities among men (e.g., Oppenheimer 2003, Thornton et al. 1995, Lloyd and South 1996, Berrington and Diamond 2000, Kalmijn 2011). The evidence is mixed for women, however; prior research has shown that the association between women's socioeconomic status and marriage is not uniform across settings or historical periods (e.g., Goldstein and Kenney 2001, Torr 2011, Kalmijn 2013).

A positive association of employment with marriage for women is explained by their greater opportunities to find a marital partner and start family life, both because employment increases interpersonal interactions between potential spouses and because women who started working before marriage are better prepared to share costs of wedding and establishing new household and thus see themselves and are seen by others as more marriageable (Waite and Spitze 1981, Oppenheimer 1994, Santow and Bracher 1994, Thomson and Bernhardt 2010). The negative effects of employment are attributed to women's economic independence and declining gains to marriage (Becker 1981).

The same argumentation has been applied to explain diverging effects of women's educational attainment, which is often considered as an indicator of earning capacity or of long-term employment prospects (see e.g., Thornton et al. 1995 for positive effects of education on marriage and Bennett et al. 1989 for negative effects).

The negative effects of socioeconomic status on marriage are also explained by increased amount of time that women invest in the accumulation of human capital (Blossfeld and Huinink 1991, Wong 2003, 2005). Whereas

the economic independence concept predicts a retreat from marriage, the human capital hypothesis suggests that rising socioeconomic status of women results in postponed, rather than forgone, marriage.

Several recent studies explain seemingly conflicting results for the relationship between women's socioeconomic status and marriage by a degree of gender-role specialization; the low specialization (egalitarian gender roles) is suggested to be associated with the positive effects of status and the high specialization (traditional division of gender roles) with the negative effects (Torr 2011, Kalmijn 2013).

Kyrgyzstan exemplifies a context with highly specialized gender roles. Although dual-earning families are common, childrearing and housework remain sole responsibilities of women. The labor market that is largely gender discriminatory in terms of earnings and career prospects together with a poor system of childcare support the division of roles between men, main breadwinners, and women whose primary task is to maintain the household.

Following the research suggesting that a high degree of gender specialization is related to negative effects of socioeconomic status on the likelihood of marriage for women, we expect to find comparatively low marriage propensities among employed and well-educated female respondents: because high specialization of gender roles also implies role incompatibility, we hypothesize that working women as well as women who had attained higher education delay marriage for the sake of career. The negative effects of employment can also imply that gainful employment reduces economic need for (early) marriage.

Independence and human capital concepts connecting a woman's socioeconomic status with her marriage propensities are not applicable to the arranged marriages as these concepts are based on the assumption that women are free to choose between professional/educational career and family. We suppose that neither employment nor educational attainment of a potential wife per se is an important characteristic in such marriages because they presume strict division of gender roles with woman being a wife and a mother rather than an extra earner in the family. However, because forced kidnappings and other arranged marriages arguably target very young women (at ages well below that of typical completion of higher education) the share of less-educated among them should be high. Correspondingly we expect that

the risks of arranged/forced marriage also will be comparatively high among less-educated women.

In line with the male breadwinner assumption we expect to find that both employment and educational attainment will be positively correlated with marriage propensities of men. This should hold for all marriage types. Yet in the case of arranged marriage, in which gender roles are typically more specialized than they are in other marriages, the effects of men's socioeconomic status, especially of employment, might be particularly strong. We also expect that well-educated men as representing culturally modernized segments of the population will be less likely to obey customary law and practices and thus to opt for 'traditional' marriage types such as arranged and forced marriage compare to men with lower education.

Apart from respondent's employment and education in our study we also account for the socioeconomic status of his/her family of origin. We expect that the family status will have an effect on arranged, but not on non-arranged marriage.

Our hypotheses on ethnic differences in marriage propensities are based on the view that Uzbeks, a traditionally sedentary agricultural people, are in general more culturally and demographically conservative compared to Kyrgyz, traditional nomads whose sedentarization and islamization were historically recent. As indicated by official statistics, Uzbeks have higher fertility, lower levels of cohabitation, and lower age at marriage and at first birth, compared to Kyrgyz (Denisenko and Kalmykova 2011, Nedoluzhko 2011). We expect that Uzbeks, *ceteris paribus*, will have relatively high risks of arranged marriage. Also, the period differences in the incidence of arranged marriages might vary for two ethnic groups. Apart from a cultural shift toward greater traditionalism, the dynamics of arranged marriages are likely to depend on such practical matter as wedding costs. Most of the wedding costs are composed of dowry among Uzbeks and "bride-price" among Kyrgyz. These practices might well have opposite effects on dynamics of arranged marriage particularly during the years of economic crisis. Thus Agadjanian and Makarova (2003) in their study on Uzbekistan relate the postponement of marriage to increased dowry and other wedding-related exchanges between groom's and bride's families. In contrast, a rise in "bride-prices" is sometimes seen as a factor fostering bride kidnapping as it might

low the financial contribution to the wedding from the groom's family (see e.g., Handrahan 2004, Kleinbach and Salimjanova 2007 for Kyrgyzstan and Lockwood 1974, Werner 1997 for other settings).

Data

Our data come from the nationally representative survey "Socio-economic and migration processes in Kyrgyzstan" conducted in 2011/12. The dataset contains respondents' childbearing, migration, partnership, employment, and educational histories and account for characteristics of the respondents, of their parents and partners (if any), and of households at the time of interview. It also covers a wide range of issues related to respondents' self-assessed health; tobacco and alcohol consumption, contraception use and abortion; child mortality; polygamy; intentions to marry, to have a[n] (other) child, and to migrate. It also provides information on respondents' gender attitudes and their perception of economic and political situation as well as on interethnic relations in the country as a whole and on a regional level. This rich information can be of diverse use for both researchers and policymakers.

In this study, we mainly employ data on respondents' current marital status. To account for the effects of individual economic characteristics and place of residence, we also use respondents' employment, educational, and migration histories. Of utmost importance to our study is the information on marriage types. To our knowledge, the survey that supplies our data is the first nationally representative sample survey that collects information on arranged marriages in post-Soviet Kyrgyzstan. It is also a pioneering survey of this kind in assessing the contemporary prevalence of bride kidnapping[1].

The survey collected data on men and women age 18-49 at time of interview (N=2032). We restrict the study population to two largest ethnic groups in Kyrgyzstan – Kyrgyz and Uzbeks. The survey sample also includes Russians and other respondents of European roots, who are not part of our research as they unlikely to experience arranged or forced marriage. We also exclude from the analysis other ethnic groups which are diverse and too small to allow for sound comparisons.

[1] There are several earlier studies that attempted to estimate the incidence of bride kidnappings in independent Kyrgyzstan, yet they are not based on representative samples (Amsler and Kleinbach 1999; Kleinbach 2003, Kleinbach et al. 2005).

The lack of retrospective data on well-being of respondents' families of origin is a limitation; we use 'father's occupation' as a proxy for socioeconomic status of a family and respondent's employment and educational attainment as proxies for his/her current socioeconomic status and conditions.

Another shortcoming of our data is that information on union type, i.e. arranged-non arranged and forced-consensual, is collected only for current unions. We do not have such information for previous unions (if any) and thereby exclude from the analysis respondents who were in union at the time of survey and who had experienced more than one official or religious marriage and those who were not in a union at the time of interview but had been married before. The share of such cases constitutes only 14 percent of the Kyrgyz sub-sample and 11 percent of the Uzbek sub-sample. Should any of union types be more susceptible of dissolution than others, the exclusion from the analytic sample of remarried and divorced/separated respondents could introduce some biases into comparative modeling of competing marriage risks. An additional limitation of the survey is that it collected information only on respondents' five most recent occupations (including occupation at the time of interview), i.e. employment histories of respondents who changed more than five occupations are truncated. Fortunately, the share of respondents who reported at least 5 occupations and thus potentially could have richer employment histories is small, constituting only 2 percent of the total sample or 3 percent of ever employed respondents.

Method

In our study we employ event-history analysis. A major advantage of this method is that it allows us to account for the effects of time-varying covariates. We fit multiplicative intensity regression (or proportional hazard) models with a piecewise-constant baseline hazard (Hoem 1971, 1976). In addition we also use the extended version of such models recently described in details by Hoem and Kostova (2008). With this extension we can model competing transitions jointly and compare the effects of various factors across these transitions.

Covariates

In our models, we control for period, respondents' age, gender, educational attainment and enrolment, employment, and the place of residence. The socioeconomic status of the respondent's family of origin is approximated by the occupation of his/her farther. Models of arranged/non-arranged marriages are additionally standardized for respondents' ethnicity – Kyrgyz and Uzbeks.

The dependent variable in our analysis is the occurrence of first marriage, which includes both officially registered marriages and marriages formed through religious ceremony without official registration. The latter category constitutes only 3 percent of the marriages among currently married respondents. Respondents' age, or more precisely, the number of months elapsed since their 16th birthday is the basic process time variable in our models. We define 5 three-year groups for respondents of age from 16 to 30 and a broader age group 30+. We lumped older ages into one group because first marital unions are rarely formed at such relatively high ages.

We differentiate between three roughly equal time periods, first of them precedes disintegration of the former USSR and two others are post-Soviet periods. The post-Soviet era is often viewed as times of revival of Islamic cultural traditions and local practices in the region, including those related to family formation (e.g., Tazmini 2001, Handrahan 2004, Brusina 2009, Werner 2009). Given the age range of our respondents, the first period – 1980-1990[1] does not include respondents over age 30, there are also few exposure months and no marriage occurrence to age group 28-30 for this period. The second period – 1991-2001 does not include respondents at age over 35. Finally, the last period, 2002-2011, includes respondents at all ages up to age 49. Because most first marriages take place at young ages the unbalanced distribution of older respondents between time periods, however, should not be a problem.

Educational attainment and enrolment of respondents' as well as their employment status and place of residence are time-varying covariates. The lowest educational level in our analysis is basic secondary education; this category also includes several drop-outs from secondary school. For employment status of the respondents we define two levels: non-employed and employed. 'Place of residence' covariate accounts for all relocations of the

[1] The oldest respondents in our data turned 16 in 1978, but there were no marriage occurrences before year 1980.

respondents within a country; observations are censored at the time of first migration abroad. We have also excluded from the analysis 17 cases of respondents moved to Kyrgyzstan from the neighboring countries - Uzbekistan and Tajikistan - after age 16. For 'place of residence' we defined three levels: the capital city- Bishkek, other urban, and rural[1].

Finally, 'father's occupation' is a time-fixed covariate that accounts for main occupation a father or a step-father of a respondent had when a respondent was approximately 15-year-old. This covariate differentiates among high status jobs (managers and highly qualified specialists), other non-agricultural, and agricultural occupations. It also includes 'non-working, not specified' category which constitutes about 12 percent of the sample and comprised of respondents whose fathers were non- or unemployed, respondents who did not specify fathers occupation ('don't know' reply), and respondents who did not have father at age 15.

We present the distribution of occurrences and exposure months by each covariate applied in our modeling in the appendix.

Results

Table 1 presents the distribution of respondents who were married at the time of interview by ethnicity, gender, and marriage cohort according to marriage type. Based on the table, more than thirty percent of marriages in our data can be classified as arranged; the share of such marriages is noticeably higher among Uzbeks. Among Kyrgyz, one-third of marriages involved bride kidnapping; half of the marriages resulted from bride kidnapping were of forced nature. The most interesting descriptive results, however, refer to period differences. They indicate that the shares of arranged and forced marriages did not increase much during the first decade after the USSR and declined considerably among the most recent marriage cohort.

[1] We also experimented with more categories for place of residence by additionally estimating risks for Osh - the largest city on Kyrgyzstan's south and subdividing urban and rural settings into northern and southern. Yet, the use of extended covariate revealed no interesting associations and therefore we do not report corresponding results.

Table 1: Study population by individual characteristics and marriage type

	Kyrgyz		Uzbeks	
	men	**women**	**men**	**women**
# of cases	571	606	131	162
currently married, %	60.5	72.4	60.4	70.9
arranged marriages (% of currently married)				
marriage decision did not involve:				
brides' input	25.7	29.7	35.0	47.5
groom's input	5.1	4.2	16.3	22.1
arranged marriages by marriage cohort (% in the marriage cohort)				
1980-1990	28.1	35.7	39.1	49.0
1991-2001	29.5	32.1	41.2	54.5
2002-2011	19.3	23.0	21.7	34.5
Marriage resulted from bride kidnapping (% of currently married)	30.3	38.0	n/a	n/a
Bride kidnappings by marriage cohort (% in the marriage cohort)			n/a	n/a
1980-1990	32.9	39.7		
1991-2001	29.5	41.4		
2002-2011	29.4	32.4		
Forced bride kidnappings, (% of kidnappings)	41.5	58.4	n/a	n/a
Forced bride kidnappings by marriage cohort (% in the cohort of marriages resulted from kidnapping)			n/a	n/a
1980-1990	37.1	64.0		
1991-2001	54.6	57.3		
2002-2011	28.6	54.2		
Mean age at first marriage	24.1	20.8	23.1	20.1

Non-arranged vs arranged marriages

In Table 2 we present the results of multivariate analysis. Model 1 combines transitions to arranged and non-arranged marriages, i.e. corresponding results refer to marriage in general, irrespective of its type. Models 2 and 3 are competing risks models, estimated separately. All three models uniformly suggest that women have higher risks of marriage compare to men, which is the reflection of the fact that women form a family at younger ages than do men.

Ethnic differences are significant only in the model of arranged marriage (Model 3), in which Uzbeks have 50 percent higher marriage risks compare to Kyrgyz. The effect of employment status is either not or only marginally significant in the models of Table 2. Because for men and women

employment status might play a different role, also depending on union type, below we examine the effects of interaction between gender and the employment covariates. Guided by our theoretical interests, we also test for an interaction between gender and the educational attainment covariates.

Supporting the common finding that schooling conflicts with family responsibilities (see e.g., Hoem 1986, Santow and Bracher 1994, Thornton et al. 1995), our results indicate significantly lower marriage risks among 'in education' respondents, compared to those of respondents who had finished education. This result is consistent in all three models. The estimates for educational attainment also uniformly suggest higher propensity to marry among more educated respondents.

Other results that are consistent throughout the three models are those for the period effects. Whereas there is no substantial or statistically significant difference in marriage risks between the two first time periods defined in our study, we find a considerable decline of both arranged and non-arranged marriage in the most recent years. Noteworthy the decline was stronger in the case of arranged marriage compare to non-arranged. These trends therefore do not support the argument often made in the ethnographic literature and in the popular media about post-Soviet "retraditionalization" of marital practices in Kyrgyzstan and in Central Asia in general.

The risks of non-arranged marriage are comparatively high in rural areas; at the same time the risks of arranged marriage appear to be somewhat higher in cities (but the difference is not statistically significant). As we expected 'father's occupation' has an effect only on arranged marriage. The highest risks of arranged marriage have respondents whose fathers worked in agriculture. This result apparently reflects the effects of the traditional cultural background rather than of economic conditions of a respondent's family of origin. Similarly as determined by cultural factors apparently can be explained the comparatively low risks of arranged marriage among children of managers and qualified specialists.

Table 2: Relative risks of first marriage, Kyrgyz and Uzbek men and women, Kyrgyzstan, 1980-2011

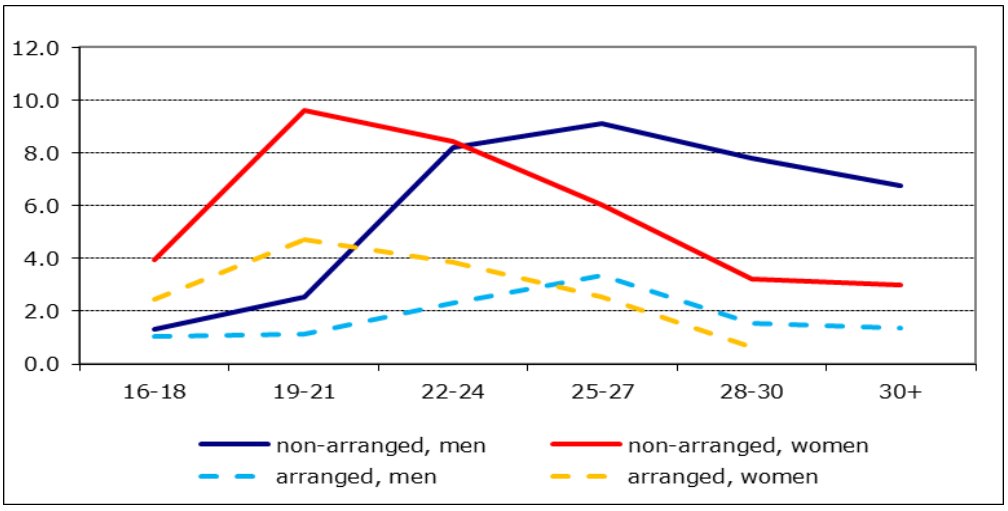
	Marriage (Model 1)	**Non-arranged marriage** (Model 2)	**Arranged marriage** (Model 3)
Gender			
Man	1	1	1
Woman	1.93**	1.81**	2.24**
Ethnicity			
Kyrgyz	1	1	1
Uzbek	1.14	0.97	1.51**
Employment			
Non-employed	1	1	1
Employed	0.98	0.91	1.16
Educational enrollment			
Out of education	1	1	1
In education	0.38**	0.41**	0.31**
Education			
Basic secondary or lower	1	1	1
General and special secondary	2.12**	2.10**	2.09**
Higher	2.83**	2.84**	2.66*
Place of residence			
Bishkek	1	1	1
Urban	1.19	1.13	1.32
Rural	1.19	1.27+	1.05
Father's occupation			
Managers and qualified specialists	1	1	1
Other non-agricultural	1.11	1.05	1.36
Agricultural	1.25*	1.00	2.14**
Non-working, not specified	1.06	1.01	1.26
Period			
1980-1990	1	1	1
1991-2001	0.95	0.95	0.99
2002-2011	0.45**	0.54**	0.29**
Age			
16-18	0.51**	0.46**	0.63**
19-21	1	1	1
22-24	1.49**	1.60**	1.24
25-27	1.45**	1.51**	1.33
28-30	0.86	1.04	0.47
30+	0.60*	0.73	0.26+

Significance level: +p≤.1, *p≤.05, **p≤.01.

To provide more insight into the effects of individual characteristics of respondents, we estimate joint models of arranged and non-arranged marriage. The joint modeling allows for direct comparison of risks across competing transitions. The essence of this analytical technique is an inclusion of decrement as an extra factor in the model, a factor which can be interacted with any of predictor or control variable.

We start the presentation of the results of joint modeling from a three-way interaction between 'gender', 'age' and 'cause of decrement' – marriage type (Figure 1). These and any other results of joint modeling should be interpreted as averages standardized for the other covariates. All interactions with the 'cause of decrement' are highly significant. Figure 1 reveals very distinct age patterns in marriage formation for men and women. At the same time for each gender these patterns are rather close for non-arranged and arranged marriages. Irrespective of marriage type, women have the highest risks at age 19-21, for men in both marriage types risks peak at later ages – 25-27. Importantly, at each age the risks of arranged marriage are considerably lower than the risks of non-arranged marriage, something that we cannot conclude on the basis of separate models for competing transitions as Model 2 and 3 of Table 2.

Figure 1: Baseline age profiles by marriage type and gender, absolute risks per 1000 person-months[1]



Note: Standardized for ethnicity, educational attainment and enrollment, employment, and place of residence

[1] There are no occurrences of arranged marriage for women at age 30+ in our data.

To answer the question whether the effects of employment detected in Table 2 differ for men and women and by union type we run another three way interaction, this time between 'gender', 'employment' and 'marriage type'. The corresponding results are presented in Table 3. They provide support for the male-breadwinner hypothesis; the propensities of both arranged and non-arranged marriage are higher among employed men compared to non-employed men. The association between employment status and marriage is negative for female respondents; this result is also consistent for both union types. The negative effect of employment suggests postponement of family formation among working women. This result can also imply that to secure well-being some women opt for marriage as an alternative to gainful employment.

It is noteworthy that our results show that for men as well as for women the difference in risks by employment status is wider in the case of arranged marriage, which suggests that in this union type male-breadwinner model is even a more likely setup of gender economic relations within a marital couple.

Table 3: Relative risks of first union formation for the two types of marriage in a joint analysis, by employment status and gender

	Non-arranged marriage		**Arranged marriage**	
	Men	Women	Men	Women
Non employed	1	2.11	0.32	1.09
Employed	1.28	1.59	0.59	0.75

Note: Standardized for age, ethnicity, educational attainment and enrollment, place of residence, and period

Table 4 illustrates differences in marriage risks by educational attainment and gender. For both men and women the risks of non-arranged marriage appear to be positively related with education, i.e., education of both partners plays a role in mate selection process. The effect of education is, however, stronger for men: men with university education have almost five times higher risks compared to men with basic secondary education; the corresponding ratio between low and highly educated women constitutes only two.

For arranged marriages, the results for the effects of educational attainment are less consistent; both men and women with intermediary educational level have the highest marriage risks, and there is no difference in propensity to marry between men with basic secondary and men with higher education. These results suggest that arranged marriage is less demanding with regard to the educational characteristics of male partner, apparently because women have no say in marriage choice.

The comparatively high propensities toward arranged marriage among female respondents with intermediary educational level possibly reflect the fact that arranged marriage is often formed by younger women and that early marriage, in turn, might be an obstacle for further education. There is also, of course, a possibility that educational attainment of a future wife is of lesser importance in arranged marriage than it is in more egalitarian non-arranged unions.

The distinct effects of education in non-arranged and arranged marriage suggest that union type is selective with regard to educational attainment of the partners. Thus in line with our hypotheses, the results in Table 4 indicate that less educated men are more likely to opt for arranged marriage, compared to most educated ones: for men with higher education the risks of non-arranged marriage is almost 6 times higher than the risks of arranged marriage (4.87/0.85); the corresponding gaps between the risks of arranged and non-arranged marriage for men in lower educational groups are smaller. We do not observe a similarly clear educational gradient for women.

Table 4: Relative risks of first union formation for the two types of marriage in a joint analysis, by education and gender

	Non-arranged marriage		**Arranged marriage**	
	Men	Women	Men	Women
Basic secondary	1	2.33	0.85	0.87
General and special secondary	2.46	4.75	0.99	2.49
Higher	4.87	4.93	0.85	2.05

Note: Standardized for age, ethnicity, employment status, educational enrollment, place of residence, and period

Table 5 presents the results of joint modeling by ethnicity. Whereas the difference between risks of non-arranged marriage for two ethnic groups considered in our analysis constitutes only 6 percent, Uzbeks have 64 percent higher risks of arranged marriage, compare to that of Kyrgyz. Uzbeks also have higher risk of arranged marriage relative to that of non-arranged.

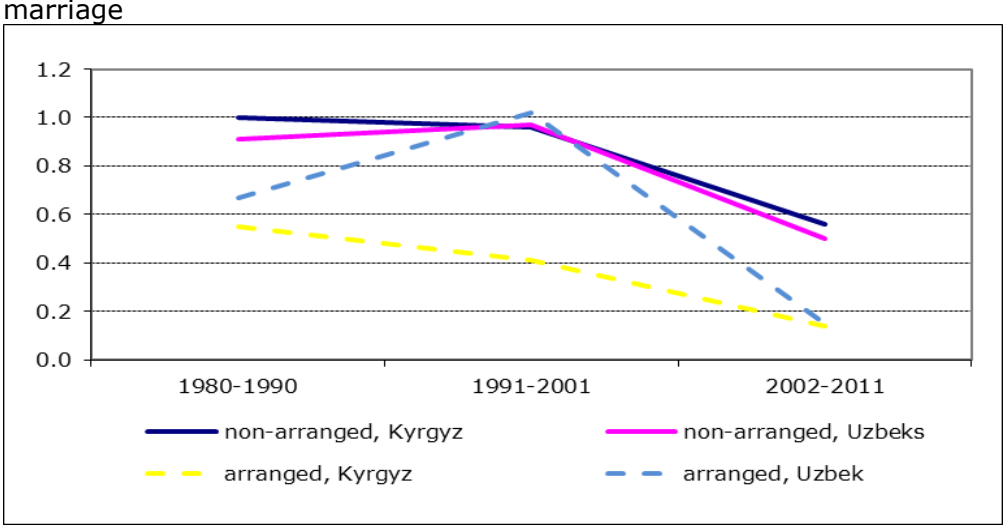
Table 5: Relative risks of first union formation for the two types of marriage in a joint analysis, by ethnicity

	Arranged marriage	**Non-arranged marriage**	**Risks of arranged marriage relative to that of non-arranged**
Kyrgyz	1	2.51	0.40
Uzbek	1.64	2.35	0.70

Note: Standardized for age, employment, educational attainment and enrollment, place of residence, and period

We further investigate the association between ethnicity and union type by looking at period change in marriage risks; Figure 2 illustrates the results of corresponding analysis. Whereas the risks of non-arranged marriage are pretty close for both ethnicities, dynamics of arranged marriage substantially vary between Uzbeks and Kyrgyz. Particularly intriguing is the increase in risks of arranged marriage among Uzbeks in the first decade of the post-Soviet era, which was characterized by dramatic economic crisis and political transformations. This results resonates with the literature on ethnic-specifies demographic response to adversity. Thus Agadjanian and Makarova (2003) in their study on Uzbekistan explain sudden marriage increase during hard economic times by dowry inflation. They argue that "transformation of dowry requirements may have put the pressure on families to marry their daughters earlier – before any further escalation of these requirements could take place". Importantly, for Kyrgyz the changes in risks of non-arranged and arranged marriage appear to be parallel, i.e. throughout the observation period these two marriage types remained balanced.

Figure 2: Trends in relative risks of non-arranged and arranged marriage



Note: Standardized for age, gender, employment, educational attainment and enrollment, and place of residence

Bride kidnapping

In this part of our paper we discuss the results on three competing transitions: marriage without bride kidnapping, mock bride kidnapping, and forced bride kidnapping among ethnic Kyrgyz. Table 6 presents the results of separate modeling for each transition. In general, these results are consistent with that presented in Table 2: with few exceptions they also detect similar associations between the main predictor variables and marriage risks in different union types. Women have significantly higher marriage risks compared to men. The gender difference is particularly pronounced in the model of marriage resulting from forced bride kidnapping, which is an indication of considerable age-gap between partners in this union type. The effect of employment is not significant; it is also appears to be negative in the model of forced bride kidnapping and positive in two other models. Yet, as we have shown already, the effect of employment should be analyzed by gender due to largely non-symmetric gender roles. We will present the results of interaction between employment status and gender covariates below.

The effect of educational attainment on marriage propensity is positive in all but one model; the highest risk of mock bride kidnapping is found among the respondents with intermediary educational level. Educational enrolment is negatively associated with marriage, irrespective of marriage type. The results for period effects again indicate the common pattern of

considerable decline of marriage propensities in recent years. Noteworthy the decline is particularly strong in the case of forced bride kidnapping.

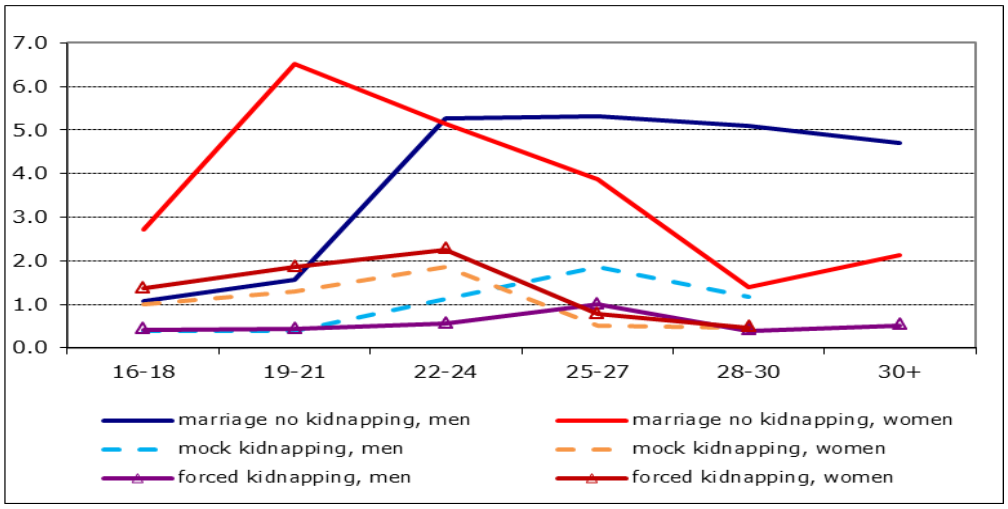
Table 6: Relative risks of first marriage, Kyrgyz men and women, 1980-2011

	Marriage without bride kidnapping (Model 2)	**Mock bride kidnapping** (Model 3)	**Forced bride kidnapping** (Model 4)
Gender			
Man	1	1	1
Woman	1.74**	1.87**	3.20**
Employment			
Non-employed	1	1	1
Employed	1.05	1.08	0.72
Educational enrollment			
Out of education	1	1	1
In education	0.41**	0.44**	0.44**
Education			
Basic secondary or lower	1	1	1
General and special secondary	2.23**	6.23**	4.37**
Higher	3.57**	3.95+	5.88**
Place of residence			
Bishkek	1	1	1
Urban	1.09	1.03	1.41
Rural	1.25	1.27	1.25
Father's occupation			
Managers and qualified specialists	1	1	1
Other non-agricultural	1.15	0.70	1.61
Agricultural	1.20	0.85	2.78**
Non-working, not specified	1.20	0.52+	1.52
Period			
1980-1990	1	1	1
1991-2001	0.90	0.86	0.99
2002-2011	0.48**	0.56*	0.37**
Age			
16-18	0.49**	0.91	0.76
19-21	1	1	1
22-24	1.48**	2.20**	1.39
25-27	1.32+	2.26*	1.13
28-30	0.90	1.27	0.48
30+	0.77	-	0.25

Significance level: +p≤.1, *p≤.05, **p≤.01.

In the next step we will present and discuss the results of the joint modeling of three competing transitions: marriage without bride kidnapping, and marriages resulting from mock or from forced bride kidnapping. We present these results following the same order as in the section on arranged and non-arranged marriages. Figure 3 demonstrates marriage risks by age, gender and marriage type. It suggests that risks of marriage without kidnapping are much higher than the risks of two other marriage types. The age profiles for men and women also differ considerably. At the same time, for each gender these profiles do not vary much in marriages resulting from bride kidnapping. The risks of mock and forced bride kidnappings for both men and women peak at later ages than that of marriage without kidnapping. In case of women such age differences by marriage type are somewhat surprising as the common view would suggest that kidnappings in particular target very young women, including women under legal marriage age.

Figure 3: Baseline age profiles by marriage type and gender, absolute risks per 1000 person-months[1]



Note: Standardized for age, ethnicity, educational attainment and enrollment, employment, and place of residence

Table 7 presents the results of a three-way interaction between marriage type, gender, and employment status. These results are consistent with those for arranged vs. non-arranged marriages (Table 4); they suggest a positive effect of employment on marriage risks for men and a negative effect

[1] There are no occurrences of mock bride kidnapping for men and women and of forced bride kidnapping for women at age 30+ in our data.

for women. Again, these results are consistent irrespective of marriage type. Interestingly, the gap in marriage risks between employed and non-employed men in the case of forced marriage is negligible, i.e. employment status of a male partner does not matter as a factor determining the incidence of such marriage.

Table 7: Relative risks of first union formation for the three types of marriage in a joint analysis, by employment status and gender

	Marriage, no bride kidnapping		**Mock bride kidnapping**		**Forced bride kidnapping**	
	Men	Women	Men	Women	Men	Women
Non employed	1	1.99	0.22	0.58	0.20	0.84
Employed	1.38	1.82	0.41	0.35	0.23	0.37

Note: Standardized for age, ethnicity, educational attainment and enrollment, place of residence, and period

We further investigate the effects of socio-economic characteristics on marriage risks by looking at educational differences by marriage type. Table 8 indicates that the effect of education is not uniform. The risks of marriage without kidnapping are the highest among respondents with higher education, and the risks of mock and forced kidnappings – among the respondents with intermediary educational level. Also in the case of mock kidnapping there is no educational difference for men. These results indicate selectivity with regard to educational attainment. For women higher marriage risks among less educated can also imply that marriage interferes with educational careers.

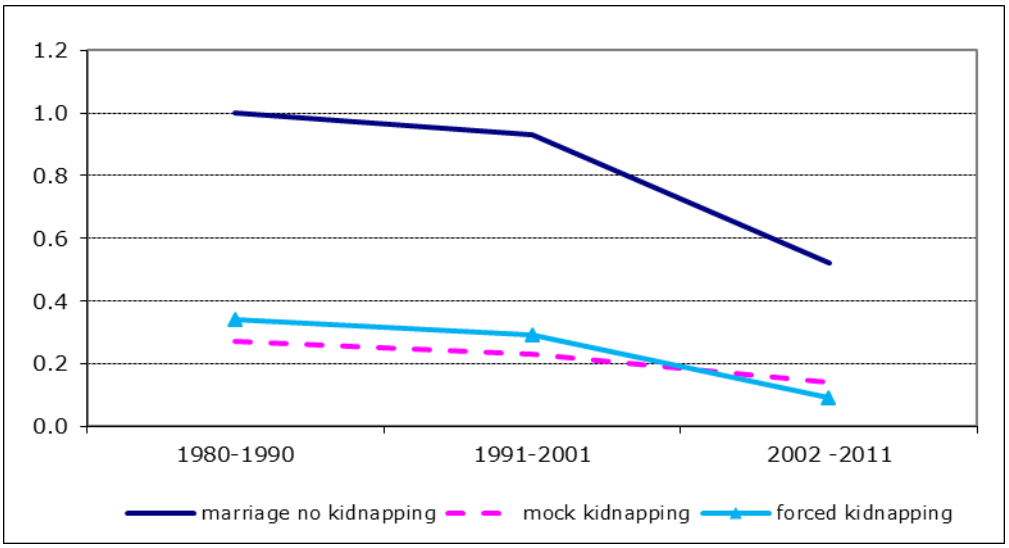
Table 8: Relative risks of first union formation for the three types of marriage in a joint analysis, by education and gender

	Marriage, no bride kidnapping		**Mock bride kidnapping**		**Forced bride kidnapping**	
	Men	Women	Men	Women	Men	Women
Basic secondary	1	1.46	-	0.40	0.10	0.53
General and special secondary	2.13	4.16	0.64	1.17	0.48	1.53
Higher	4.61	4.76	0.63	0.70	0.27	1.40

Note: Standardized for age, ethnicity, employment status, educational enrollment, place of residence, and period

Figure 4 illustrates the period change in marriage risks. Our results suggest that the decline in propensity to marry is a general pattern for all union types. Noteworthy, the decline has been stronger in the case of forced bride-kidnapping – a union type that often said to reemerge after the dissolution of the USSR. The risks of forced kidnapping in 2002-2011 were 74 percent lower than in 1980-1990. For other marriage types declines between these periods constituted only about 50 percent.

Figure 4: Trends in relative risks of marriage with and without bride kidnapping



Note: Standardized for age, gender, employment, educational attainment and enrollment, and place of residence

Summary and discussion

This paper contributes to the limited research on nuptiality in Central Asia with the special focus on Kyrgyzstan. It also tests the applicability of the specialization and trading model of marriage in a cultural context with high gender-role specialization. We analyzed transition to first marriage, either officially registered or formed through religious ceremony without official registration. We employed two classifications to differentiate between various marriage types which we analyze as competing risks. First, we contrasted marriages with regard to groom's or bride's input in marriage decision, classifying them as non-arranged and arranged. Second, we distinguish between marriages that either involved or did not involve bride kidnapping,

the former category also being subdivided into mock (elopement) and forced (abduction) kidnappings.

Our study produced a number of interesting results. Supporting our general assumption regarding the prevalence of nonsymmetrical gender roles in settings like Kyrgyzstan, the results of our study suggest that the male-breadwinner model is typical for all marriage types. Employed men have consistently higher marriage risks compare to their non-employed counterparts regardless of other factors. For women, on the contrary, the effect of employment is negative; this finding is also uniform across all marriage types.

The results presented in this study indicate that marriage types are selective with regard to educational attainment of the respondents. Both men and women with higher education have the highest risks of non-arranged marriage and of marriage without bride kidnapping, which are more egalitarian, or less traditional, compared to the other marriage types. The risks of arranged marriage and of marriage that involved either mock or forced kidnapping are comparatively high among respondents with general secondary or general special education which is a mid educational level in our study. The educational selectivity by marriage type is supported by the research on other settings which suggests that more educated individuals are more likely to abandon traditional marriage practices, such as arranged marriage, and opt for individual-choice marriage, compare to the less educated (see e.g., Caldwell 1983, Bhopal 1997, Ghimire et al. 2006).

Our study demonstrates that risks of non-arranged marriage are considerably higher than the risks of arranged marriage. Similarly, the risks of marriage with no bride kidnapping are much higher compared to the risks of either mock or forced kidnappings. Clearly the traditional ways to marry, while persisting, are not particularly popular among Kyrgyzstanis.

The results we present here provide no support to the claim often made in ethnographic studies that bride kidnapping has made a major comeback since the breakup of the USSR. We find that risks of bride kidnapping, particularly of forced bride abduction, has actually declined in the post-Soviet era. The declines took place already during the first decade after USSR, yet were particularly pronounced in more recent years.

Another finding of our study that put in question the widespread beliefs on kidnappings is the comparatively high ages of adducted or eloped brides. In the media it is often emphasized that kidnappings are most likely to happen to very young women. We find that for both women and men risks of marriage resulting from mock or forced bride kidnapping peak at later ages than the risks of marriage without kidnapping.

It is important to note that continuous decline is a common tendency for all but one marriage trajectories analyzed in our study. With the exception of a sudden jump in risks of arranged marriage among Uzbeks during the first decade after the USSR, period changes were similar across marriage types thus maintaining arranged, forced and other marriage types in some sort of balance. The increase in propensity of arranged marriage for Uzbeks could well be a demographic response to economic, political and cultural changes in society as suggested by Agadjanian and Makarova (2003). Yet we believe it requires further investigation with more data on ethnic minorities of Kyrgyzstan that would cover the marriage-related expenses of dowry and "bride-price". Declining marriage propensities suggest another issue that need to be addressed in the further research on family formation in the region – dynamics and prevalence of the alternative to marriage union type - cohabitation. So far this topic has not received much attention.

References:

Abdurasulov, A. "Bride-kidnapping debate divides Kyrgyzstan". BBC News 12 December 2012. http://www.bbc.co.uk/news/world-asia-20675101. Accessed 13 August 2013.

Agadjanian, V. (1999). Post-soviet demographic paradoxes: ethnic differences in marriage and fertility in Kazakhstan. *Sociological Forum* 14(3): 425–446.

Agadjanian, V. and Makarova E. (2003). From Soviet modernization to post-Soviet transformation: understanding marriage and fertility dynamics in Uzbekistan. *Development and Change* 34(3): 447-473.

Agadjanian, V., Dommaraju, P. and Glick, G. (2008). Reproduction in upheaval: ethnicity, fertility, and societal transformations in Kazakhstan. *Population Studies* 62(2): 211-233.

Agadjanian, V. and Dommaraju, P. (2011). Culture, modernization, and politics: Ethnic differences in union formation in Kyrgyzstan. *European Journal of Population* 27: 79–101.

Amsler, S. and Kleinbach, R. (1999). Bride kidnapping in the Kyrgyz Republic. *International Journal of Central Asian Studies* 4: 185-216.

Becker, G.S. (1981). *A Treatise of the Family.* Cambridge, MA: Harvard University Press.

Bennett, N.G., Bloom, D.E., and Craig, P.H. (1989). The divergence of black and white marriage patterns. *American Journal of Sociology* 95: 692-722.

Berrington, A. and Diamond, I. (2000). Marriage or cohabitation: A competing risks analysis of first-partnership formation among the 1958 British birth cohort. *Journal of the Royal Statistical Society* 163: 127-151.

Bhopal, K. (1997). South Asian women within households. *Women's Studies International Forum* 20(4): 483-492.

Blossfeld, H. P., and Huinink, J. (1991). Human capital investments or norms of role transition: How women's schooling and career affect the process of family formation. *The American Journal of Sociology*, 97(1): 143–168.

Borbieva, N. O. (2012). Kidnapping women: Discourses of emotion and social change in the Kyrgyz Republic. *Anthropological Quarterly* 85(1): 141–170.

Brusina, O. I. (2008). Sharia and civil law in marital relations of the Muslim population in Central Asia. *Anthropology and Archeology of Eurasia* 47(2): 53–68.

Caldwell, J. C. (1983) "Direct economic costs and benefits of children." In R. A. Bulatao and R. D. Lee (eds.), Determinants of Fertility in Developing Countries: 370-397. Washington, DC: National Academy Press.

Denisenko, M. (2005). Marriage patterns in Kyrgyzstan. Paper presented at the XXVth International Population Conference of the International Union for the Scientific Study of Population (IUSSP), Tours, France, July 18-23, 2005. <http://iussp2005.princeton.edu>

Denisenko, M. and Kalmykova, H. (2011). Nuptiality and divorce, in Denisenko, M. (Ed.), Population of Kyrgyzstan at the Turn of the XXI Century. Bishkek: UNFPA in Kyrgyzstan (in Russian), pp. 93−117.

Ghimire, D. J., Axinn, W. G., Yabiku, S. T. and Thornton, A. (2006). Social change , premarital nonfamily experience, and spouse choice in an arranged marriage society. *American Journal of Sociology* 111(4): 1181-1218.

Goldstein, J. R. and Kenney, C. T. (2001). Marriage Delayed or Marriage Forgone? New Cohort Forecasts of First Marriage for U.S. Women. *American Sociological Review* 66:506-519.

Handrahan, L. (2004). Hunting for women: Bride-kidnapping in Kyrgyzstan. *International Feminist Journal of Politics* 6: 207–233

Hoem, J. M. (1971). Point estimation of forces of transition in demographic models. *Journal of the Royal Statistical Society*, *Series B* 33(2): 275-289.

Hoem, J. M. (1976). The statistical theory of demographic rates: A view of current developments (with discussion). *Scandinavian Journal of Statistics* 3(4): 169-185.

Hoem, J. M. (1986). The impact of education on modern family-union initiation. *European Journal of Population* 2 (2): I13-133.

Hoem, J. M. and Kostova, D. (2008). Early traces of the Second Demographic Transition in Bulgaria: A joint analysis of marital and non-marital union formation, 1960-2004. *Population Studies* 62(3): 259-271.

Hoelter, L. F., Axinn W. G., and Ghimire D. G. (2004). Social change, premarital nonfamily experiences, and marital dynamics. *Journal of Marriage and Family* 66(5): 1131-1151.

Kalmijn, M. (2011). The influence of men's income and employment on marriage and cohabitation: Testing Oppenheimer's theory in Europe. *European Journal of Population* 27: 269-293.

Kalmijn, M. (2013). The educational gradient in marriage: A comparison of 25 European countries. *Demography* 50: 1499–1520.

Kalybekova, A. "Kyrgyzstan: bride kidnapping not just a rural phenomenon". EURASIANET 10 May 2013. http://www.eurasianet.org/node/66952. Accessed: 15 August 2013.

Kleinbach, R. (2003). Frequency of non-consensual bride kidnapping in the Kyrgyz Republic. *International Journal of Central Asian Studies* 8(8):108-128.

Kleinbach, R. and Salimjanova, L. (2007). Kyz ala kachuu and adat: Non-consensual bride kidnapping and tradition in Kyrgyzstan. *Central Asian Survey* 26(2): 217–233.

Kleinbach, R., Ablezova, M, and Aitieva, M. (2005). Kidnapping for marriage (ala kachuu) in a Kyrgyz village. *Central Asian Survey* 24(2): 191–202.

Kravdal, Ø. 1999. Does marriage require a stronger economic underpinning than informal cohabitation? *Population Studies-A Journal of Demography* 53 (1): 63-80.

Lloyd, K.M. and South, S.J. (1996). Contextual influences on young men's transition to first marriage. *Social Forces* 74(3): 1097-119.

Lockwood, W. G. (1974). Bride theft and social maneuverability in Western Bosnia. *Anthropological Quarterly* 47(3):253-269.

Nedoluzhko, L. and Agadjanian, V. (2010). Marriage, childbearing, and migration: Exploring interdependences. *Demographic Research* 22(7): 159-188.

Oppenheimer, V. K. (1994). Women's rising employment and the future of the family in industrial societies. *Population and Development Review* 20(2): 293 -342.

Oppenheimer, V. K. (2003). Cohabiting and marriage during young men's career-development process. *Demography* 40:127-149.

Santow, G. and Bracher, M. (1994). Change and continuity in the formation of 1st marital unions in Australia. *Population Studies* 48(3): 475-496.

Tazmini, G. (2001). The Islamic revival in Central Asia: A potent force or a misconception? *Central Asian Survey* 20(1):63-83.

Thomson, E. and Bernhardt, E. (2010). Education, values, and cohabitation in Sweden. *Marriage and Family Review* 46: 1-21.

Thornton, A., Axinn, W.G. and Teachman, J.D. (1995). The influence of school enrollment and accumulation on cohabitation and marriage in early adulthood. *American Sociological Review* 60 (5): 762-774.

Torr, B.M. (2011). The changing relationship between education and marriage in the United States, 1940-2000. Journal of Family History 36(4): 483-503.

Waite, L.J. and G. D. Spitze, G.D. (1981). Young women's transition to marriage. Demography, 18: 681-694

Werner, C. (1997). Marriage, markets, and merchants: Changes in wedding feasts and household consumption patterns in rural Kazakhstan. *Culture and Agriculture* 19(1/2): 6-13.

Werner, C. (2009). Bride abduction in post-Soviet Central Asia: Marking a shift towards patriarchy through local discourses of shame and tradition. *Journal of the Royal Anthropological Institute* 15: 314-331.

Wong, O. H. (2003) Postponement or Abandonment of Marriage? Evidence from Hong Kong. *Journal of Comparative Family Studies* 34(4): 531-554.

Wong, O. H. (2005) The socioeconomic determinants of the age at first marriage among women in Hong Kong. *Journal of family and economic issues* 26(4): 529-550.

Appendix 1

Exposures and occurrences (aggregate and distribution in %)

1) Non-arranged and arranged marriage

	Exposures		Occurrences			
			Non arranged marriage		**Arranged marriage**	
		%		%		%
GENDER						
men	57342	54.4	303	44.8	115	38
women	48079	45.6	373	55.2	188	62
ETHNICITY						
Kyrgyz	86660	82.2	563	83.3	224	73.9
Uzbek	18761	17.8	113	16.7	79	26.1
EMPLOYMENT						
non-employed	80688	76.5	458	67.8	201	66.3
employed	24733	23.5	218	32.2	102	33.7
ENROLLMENT						
out of education	63099	59.9	590	87.3	272	89.8
in education	42322	40.1	86	12.7	31	10.2
EDUCATION						
basic secondary	27014	25.6	37	5.5	20	6.6
general or special secondary	72477	68.8	546	80.8	258	85.1
higher	5930	5.6	93	13.8	25	8.3
RESIDENCE						
Bishkek	16173	15.3	81	12	26	8.6
urban	24119	22.9	140	20.7	73	24.1
rural	65129	61.8	455	67.3	204	67.3
PERIOD						
1980-1990	25103	23.8	179	26.5	106	35
1991-2001	32184	30.5	274	40.5	140	46.2
2002-2011	48134	45.7	223	33	57	18.8
AGE						
16-18	49336	46.8	132	19.5	88	29
19-21	31628	30	241	35.7	115	38
22-24	14834	14.1	199	29.4	68	22.4
25-27	5087	4.8	68	10.1	26	8.6
28-30	2097	2	20	3	4	1.3
30+	2439	2.3	16	2.4	2	0.7

2) Marriage without bride kidnapping, mock and forced kidnappings

	Exposures		Occurrences					
			No kidnapping		**Mock kidnapping**		**Forced kidnapping**	
		%		%		%		%
GENDER								
men	48106	55	238	46.3	60	45.1	44	30.8
women	39285	45	276	53.7	73	54.9	99	69.2
EMPLOYMENT								
non-employed	67489	77.2	338	65.8	89	66.9	111	77.6
employed	19902	22.8	176	34.2	44	33.1	32	22.4
ENROLLMENT								
out of education	50395	57.7	447	87	114	85.7	121	84.6
in education	36996	42.3	67	13	19	14.3	22	15.4
EDUCATION								
basic secondary	20370	23.3	21	4.1	3	2.3	5	3.5
general or special secondary	61398	70.3	408	79.4	118	88.7	125	87.4
higher	5623	6.4	85	16.5	12	9	13	9.1
RESIDENCE								
Bishkek	15905	18.2	72	14	18	13.5	15	10.5
urban	18468	21.1	99	19.3	24	18	31	21.7
rural	53018	60.7	343	66.7	91	68.4	97	67.8
PERIOD								
1980-1990	19757	22.6	135	26.3	36	27.1	46	32.2
1991-2001	27705	31.7	216	42	54	40.6	68	47.6
2002-2011	39929	45.7	163	31.7	43	32.3	29	20.3
AGE								
16-18	39703	45.4	100	19.5	36	27.1	47	32.9
19-21	26023	29.8	178	34.6	38	28.6	50	35
22-24	12770	14.6	153	29.8	40	30.1	33	23.1
25-27	4582	5.2	52	10.1	15	11.3	10	7
28-30	2017	2.3	16	3.1	4	3	2	1.4
30+	2296	2.6	15	2.9	0	0	1	0.7