



PSC Research Reports

Report 15-835

January 2015

Zheng Mu and Xiwei Wu

Residential Concentration and
Marital Behaviors of Muslim
Chinese

Residential Concentration and Marital Behaviors of Muslim Chinese

Zheng Mu

Xiwei Wu

Population Studies Center Research Report 15-835
January 2015

Acknowledgements: An early version of this paper was presented at the 2011 International Sociological Association Research Committee 28 on Social Stratification and Mobility spring meeting in Essex, UK. We are grateful to conference participants, members of the Population Workshop at the Population Studies Center of the University of Michigan, as well as Barbara Anderson, Jennifer Barber, Siwei Cheng, Mary Corcoran, Qing Lai, Arland Thornton, Geoff Wodtke, and Yu Xie for their comments and advice. We also thank Cindy Glovinsky for her editorial help.

Zheng Mu (corresponding author), Asia Research Institute and Centre for Family and Population Research, National University of Singapore, Singapore 259770. arimuz@nus.edu.sg Phone: 65-6516 5205

Xiwei Wu, Center for Population and Development Studies, Renmin University of China, Beijing, China 100872

Abstract

This paper examines how the marital behaviors of Hui Muslims respond to varying conditions of local ethnic marriage markets. Specifically, we explore marriage patterns indicating adherence to two Islamic norms: universal marriage and endogamy. We measure marriage market conditions by local concentrations of Hui and we estimate discrete-time hazard models of marital outcomes using the China 2005 1% inter-census survey. Results show that in places with higher Hui concentrations, Hui tend to have higher marriage rates, to marry earlier, and to marry more endogamously. Conditional on being married, the logged odds of exogamy over endogamy are significantly lower in places with higher Hui concentrations; nevertheless, if we treat exogamy as an alternative to being single, the coefficient of the logged odds of exogamy over singleness is significantly negative only for women. This suggests coexistence and competition between the two Islamic norms. Moreover, women have consistently higher marriage rates than do men, regardless of Hui concentration. This indicates that women are universally more strictly constrained by the norm of universal marriage than are men. However, men show more variation in marriage rates, indicating that they are more responsive to changes in Hui concentrations. Men and women are equally restricted by the norm of endogamy.

1. Introduction

Social context plays an important role in forming and framing individuals' marital behaviors (Blau 1977; Blau and Schwartz 1997). In sociological studies on marriage and the family, the relationship between local population composition and individuals' marital choices has long been a research focus (e.g., Blau, Blum and Schwartz 1982; Harris and Ono 2005; Kennedy 1943; Lewis and Oppenheimer 2000; Lichter, Anderson and Hayward 1995; Raley 1996; Schoen and Kluegel 1988). Numerous studies have interpreted these contextual effects as structural constraints that influence one's chances of meeting a potential spouse with particular traits (e.g., Blau et al. 1982; Lewis and Oppenheimer 2000; Lichter et al. 1995; Raley 1996; Schoen 1983, 1988; Zeng and Xie 2008). Aside from the structural constraints, other studies have also shown that social context may influence individuals' marital behaviors through "cultural pathways." These pathways create preferences for, or impose group-level pressures against, specific marital outcomes (Barber 2004; Cheng and Xie 2013; Jennings and Barber 2013).

As the only Chinese-speaking Muslim group in China, the Hui people are unique in their ethno-religious characteristics. Hui are different from other Muslim Chinese ethnic groups,¹ especially those of Turkic ancestries. Hui are nearly indistinguishable from China's ethnic majority, the Han, in physical appearance and language, and they are well assimilated into Han culture. Their Islamic religion is almost the only characteristic that separates them into a distinct group (Lipman 1997). Hence, marrying within the Hui group, i.e., choosing ethnic endogamy,² has long been strictly practiced by Hui people to secure ethnic identity and maintain religious purity (Zhou 2001). This practice of endogamy is also enforced by the Islamic religion, which in the meantime promotes universal marriage and men's dominance over women (Abbasi-Shavazi and McDonald 2008; Khairabadi 1982; Mernissi 1996). Therefore, Hui's marital behaviors are constrained by both the norm of endogamy and the norm of universal marriage, and women may experience stronger normative pressures than do men.

¹ Language identifies the various Muslim ethnic groups in China as follows: the Uygur, Qazak, Tatar, Uzbek, Salar, and Kirgiz speak Turkic; the Dongxiang and Bonan speak Mongolic; the Tajiks speak Persian; and the Hui speak Chinese (Lipman 1997).

² Due to the physical distinctions between Hui and other Muslim ethnic groups, intermarriages among the different Muslim groups are extremely rare (China Data Center 2005). Hui Muslims mainly rely on ethnic endogamy, i.e., marriage within the Hui group, to maintain religious endogamy (Mackerras 1998).

In terms of operationalization, the unique pattern of Hui's residential distribution makes the local concentration of Hui a good measure of the contextual factor that influences individual marital behaviors. First, Hui, as the most residentially dispersed minority group in China, are most likely to be exposed to varying contextual influences. In addition, their residential concentration shows a pattern of "national dispersion, local concentration" ("da fen san, xiao ji zhong") (Hai 2010; Ma 2000). In most cases, Hui people self-select themselves to live in places with a higher Hui concentration for more convenient living and religious activities (Hai 2010; Ma 2000). In these places, the Islamic religion has usually been practiced more thoroughly and devoutly (Mamet, Jacobson and Heaton 2005). Thus, the residential concentration of Hui can not only measure the structural constraints preventing Hui from meeting potential spouses within the Hui population, but also capture the normative pressures against choosing exogamy or remaining single.

Specifically, using data from the China 2000 census and the 2005 1% inter-census survey (2005 mini-census), this paper examines how the prefecture-level Hui concentration influences Hui Muslims' choices between endogamy, exogamy and singleness, for men and women respectively. By conducting this empirical investigation, the paper contributes to the field of marriage and the family in two ways: first, it tests the contextual influence of the local ethnic marriage markets on individual marital choices in a unique Chinese Muslim group, whose residential patterns reflect both the structural constraints and the cultural pressures involved in making marital choices. More importantly, by comparing the contextual effects across different marital outcomes and by gender, it sheds light on the relative strengths of the two cultural norms of marriage for Hui Muslims, as well as the gender difference in the strictness of those norms.

2. Theoretical Issues and Research Setting

2.1 Marriage market conditions and marital choices

A body of literature has focused on the relationship between "field of eligibles" within the local marriage markets and the resulting marital choices (Blau et al. 1982; Blau and Schwartz 1997; Lewis and Oppenheimer 2000; Lichter 1990; Lichter, LeClere and McLaughlin 1991; Lichter et al. 1992; Lichter et al. 1995). Those studies often measure conditions of the local marriage markets either by sex ratios (Lichter et al. 1992; Lichter et al. 1995), the local concentrations of specific groups, or the overall local heterogeneities in terms of age, race/ethnicity, education or

economic potentials (Blau et al. 1982; Blau and Schwartz 1997; Lewis and Oppenheimer 2000; Schoen and Kluegel 1988). For interpretation, most of those studies consider conditions of the local marriage markets as structural constraints, that is, the extent to which unmarried individuals are sufficiently exposed to the opportunities to meet potential mates (Blau et al. 1982; Blau and Schwartz 1997).

However, aside from the structural constraints, the local marriage market can also form and frame cultural factors, such as norms and preferences (Cheng and Xie 2013; Lichter 1990; Zeng and Xie 2008), which influence individuals' marital behaviors through distinctive mechanisms (Fu 2001; Jayakody, Thornton and Axinn 2008; Kalmijn and Van Tubergen 2010; Thornton 2001, 2005). Specifically, social context can operate either through local socialization or through local social pressure (Jennings and Barber 2013). First, through close and constant interactions among individuals within the local area, the prevailing beliefs and attitudes may diffuse. This process may lead local individuals to internalize the locally dominant preference and fortify or change their own preferences to fit with the mainstream ones (Barber 2004; Dharmalingam 1996; Katz, Joiner and Kwon 2002). In addition, a local community can also exert social pressures on individuals by enforcing social norms. In order to blend in with the community, individuals may conform to the norms even when their own desires run counter to the dominant ones (Coleman 1990; Fishbein and Ajzen 2010; Troyer and Younts 1997). That is, social contexts may play a unique role in forming and changing individuals' marital behaviors, aside from the structural constraints.

For example, in places where a higher percentage of the population have received post-secondary education, structurally speaking, there is a larger supply of socioeconomically attractive "candidates" for marriage, and this larger supply should lead to higher rates of marriage as well as earlier ages at marriage. However, on the other hand, in those places with more highly educated individuals, people's attitudes toward marriage also tend to be more liberal and more individualistic, and they may confront less pressure to behave in alignment with others' opinions, which could result in fewer and later marriages. Hence, it is crucial to understand the contextual effects of the local marriage market through both structural and cultural pathways. In this sense, our measure of the contextual condition – local concentration of Hui – captures both the structural constraints and the cultural influences of the local social context.

2.2 Chinese Hui Muslim

Hui Muslim is one of the ten Muslim ethnic groups and one of the fifty-five minority ethnic groups in China. While the ethnic majority Han dominates 90.95% of the national population, Hui only constitute 0.77% (China Data Center 2005). They are highly similar to Han in physical appearance; they speak Chinese and have adopted most of the cultural practices of Han. Except for their Islamic religion, Hui have been well acculturated by the majority Han (Zang 2005, 2006, 2012). Also, as the most widely dispersed minority group, Hui are subject to varying levels of local residential concentration and thus experience differential tensions between the desire to retain their own ethnic identity and the necessity to assimilate into the Han culture. Since one major indicator of ethnic assimilation is the rate of intermarriage (Qian 1997; Qian and Lichter 2007; Schoen, Wooldredge and Thomas 1989), Hui constitutes an ideal group on whom we could apply the framework of the relationship between the local marriage market conditions and the resulting marital choices.

It has been widely established that the Islamic religion is patriarchal and endogamous in family practices (Abbasi-Shavazi and McDonald 2008; Khairabadi 1982; Mernissi 1996; Morgan et al. 2002; Zang 2005, 2006). Islam strongly emphasizes the family and considers it the foundation of a society (Abbasi-Shavazi and McDonald 2008). Correspondingly, as believers in Islam, Hui tend to establish their families at early ages, to value universal marriage, and to marry within their group so as to secure ethnic identity and to preserve religious purity. Thus, we expect Hui's marriages to be earlier, more prevalent, and more endogamous when they are exposed to stronger Islamic norms. However, given Hui's dual strong norms of universal marriage and endogamy, it is of interest to know, when social context imposes constraints on the realization of the two norms, how Hui persons respond – by delaying marriage, staying single, or marrying outside of the group? The answer to this question sheds light on the relative strengths of the two norms. Also, Islam prescribes that women should be subordinate to men (Abbasi-Shavazi and McDonald 2008; Khairabadi 1982). Would women thus be subject to stronger religious norms in marital behaviors? The answer to this question contributes to understanding of the gendered restrictiveness of the two norms.

As aforementioned, Hui's residential concentration is a proper candidate for measuring the local contextual conditions which influence Hui's marital decisions. Specifically, the most

salient feature of Hui's residential concentration is "national dispersion, local concentration" ("da fen san, xiao ji zhong") (Hai 2010; Ma 2000). Hui Muslims tend to self-select into areas with higher Hui concentrations so that they can build their own living facilities, such as mosques, schools, restaurants, and perform religious practices more rigorously. That is, residential concentration better facilitates religious practices and secures religious beliefs (Kalmijn 1998). Correspondingly, in places with higher Hui concentrations, Islamic beliefs are usually more powerful, and Hui Muslims are often more devout and follow religious practices more strictly (Hai 2010; Ma 2000). Thus, in terms of its impact on marital choices, local concentration of Hui indicates not only Hui Muslims' potential opportunities to meet other eligible Hui peers as possible spouses, but also the religious norms imposed on Hui Muslims or internalized by them for making marital choices.

To recapitulate, Hui Muslims hold norms of universal marriage and endogamy. Therefore, in places with higher concentrations of Hui, we expect higher marriage rates, younger ages at marriage and a larger prevalence of endogamy. This could be due to both increased opportunities to meet other Hui as eligible marriage candidates and stronger norms regarding marriage, imposed or internalized. However, what happens to Hui who are faced with a choice between exogamy and delay of marriage or even singleness? Do they choose exogamy to fulfill the norm of universal marriage or delay or even retreat from marriage to maintain the norm of endogamy? Do men and women behave differently in this respect?

More explicitly, this paper aims to answer the following three research questions:

- (1) How do marriage timing and the marriage rate of Hui vary across levels of Hui concentration?
- (2) How does Hui's tendency to choose exogamy vary across levels of Hui concentration and how do the variations differ for various marital outcomes regarding exogamy?
- (3) Do Hui men and women respond to Hui concentration differently?

By answering these three questions, we apply the framework of the contextual effects on marital choices in a unique ethnic group by operationalizing both the structural and the cultural conditions of the social context. More importantly, by comparing the contextual effects on various marital choices, this study sheds light on the relative strengths of the two norms regarding marriage and also on Islamic gender ideology among Hui people.

3. Data and Methods

This study is based mainly on a random sample of the China 2005 1% inter-census survey (2005 mini-census). We use both discrete-time hazard models and binary logit models to estimate the contextual effects on marital choices. All models are estimated separately for men and women regarding their potentially differential mechanisms in marital choices (Xie et al. 2003).

3.1 Analytical samples

We construct two separate samples for different analyses. The first sample is a larger sample and is restricted to only Hui Muslims aged 15-50,³ the age range that is most at risk for marriage. We use this sample to compute some descriptive results so as to get a more general profile of the relationship between local Hui concentration and Hui's marital behaviors, considering the smaller sample size after further data restrictions.

The second sample involves more restrictions so as to maximally guarantee the statistical rigor of the main analysis.⁴ First, the China 2005 mini-census does not include information on the place of marriage, so the resulting measures of the local marriage market conditions based on respondents' current place of residence may not reflect the contextual characteristics they were actually exposed to when they married. Hence, we restrict the dataset to those who did not leave their place of residential registration and those who lived within the province of residence both one year before the 2005 mini-census (Year 2004) and five years before it (Year 2000). Second, we further restrict the sample to those who were still single in 2000 (they may have remained single in 2005 or married between 2000 and 2005) so as to include those who were under the contextual influence of 2000 in their places of residential registration as shown in the 2005 mini-census. This restriction is based on the assumption that the local concentrations of Hui were relatively stable across a five-year time span, which seems reasonable (Hai 2010; Ma 2000). By making this restriction, we also account for the fact that an individual's marital choices should be attributable to marriage market conditions before the time of marriage. Accordingly, we calculate the local concentration of Hui based on the 2000 census data. Third, for individuals already

³ Descriptive statistics of this sample are in Appendix Table 2.

⁴ Descriptive statistics of this sample are in Appendix Table 1.

married in 2005, we include only those in their first marriages, as the dataset only includes information on age at first marriage. These restrictions leave us with 2,804 observations for men and 2,399 observations for women. In order to capture the proper pool of eligible marriage candidates and to accurately estimate the likelihood of marital choices, for analysis on marital transitions from singleness, we transform the dataset into a pseudo-longitudinal format with person-years being the unit of analysis (Hannum, Wang and Adams 2008). The total amount of exposure is 19,005 person-years for men and 13,322 person-years for women.

3.2 Conceptualizing marital choices

As mentioned above, Hui Muslims are constrained by two norms of marriage: universal marriage and endogamy. In practice, these norms involve decisions about whether to get married and whether to marry only within the Hui population. To examine the contextual influences on the first decision, we can simply treat endogamy and exogamy as equivalent destinations from singleness, and compute the total marriage rate based on the outcome of married versus single (Thornton, Axinn and Xie 2010). For the second decision, however, we need to consider the heterogeneities among individuals so as to gain a fuller understanding of the mechanisms underlying their marital choices. If we assume that the prevailing marital outcomes are an accurate reflection of a person's actual marital preference, then whether we include single persons in the analysis may influence the theoretical interpretations that follow.

Specifically, if we focus exclusively on those already married, we may conceptualize them as individuals who are fortunate enough to be able to contract marriage with partners of their preferred type and assume that their existing marital choices fully reveal their marital preferences between endogamy and exogamy. By taking this approach, we examine the relative prevalence of exogamy over endogamy, which only measures the strength of the norm of endogamy.

However, if we introduce those who are still single into the picture, we may assume that we are including those who are still out there on the marriage market, debating between the two norms of marriage. They may be waiting for a partner who is also Hui, or they may have already foregone marriage in order to avoid exogamy. Based on this latter approach, which includes everyone, we are conceptualizing the marital decision process as one where people treat

endogamy, exogamy, and singleness as independent competing options. By this approach, we can evaluate the prevalence of exogamy over singleness, which measures the relative strength of the two norms.

In practice, based on the first approach, we evaluate the contextual effects on the logged odds of exogamy over endogamy among married Hui only. Based on the second approach, we use a pair of outcomes of endogamy versus singleness, and exogamy versus singleness among all Hui (Thornton et al. 2010).

3.3 Measures

Dependent Variables:

Marital choices. For the choice of getting married or not, this is a binary variable with 0=stay single and 1=married, and we use discrete-time hazard models. Conditional on getting married, for the choice between endogamy and exogamy, we use a binary variable with 0=endogamy and 1=exogamy and accordingly binary logit models. For the choice between endogamy, exogamy and singleness, we use two binary variables of endogamy or singleness with 0= stay single and 1= endogamy, and exogamy or singleness with 0=stay single and 1= exogamy, and a pair of discrete-time hazard models correspondingly.

Key Independent Variable:

Local conditions of ethnic marriage markets. We use prefecture-level concentrations of Hui to measure conditions of the local ethnic marriage market. Specifically, it is calculated as the percentage of Hui population over the total population in a given prefecture. Note that we compute the percentages at the prefecture-level, an administrative unit small enough to ensure sufficient variability across units and large enough to reflect the scale of the marriage market that has actually influenced the individual marital choices. We assume relative stability in conditions of ethnic marriage markets within a time span of five years. We also assume that one's marital choice is influenced by the marriage market conditions prior to the time of marriage, ensuring that the marriage market conditions are sufficiently exogenous to the individual marital choices. Correspondingly, we use the 2000 census data to compute the local concentrations of Hui that have influenced the marital choices between 2000 and 2005. In total, we have 344 prefecture-level Hui concentrations.

Other Control Variables:

Age and age squared: We use both the linear function of age and age squared to capture the potential quadratic pattern in the age effect. That is, people may become increasingly responsive to pressures to marry up to a certain age, when it becomes more difficult to find a suitable partner or when they decide not to get married at all. *Education:* We include it as years of schooling completed. We recode the years of schooling as: illiterate=3; primary school=6; junior high=9; senior high=12; associate degree=15; college and graduate school=17 (Xie and Hannum 1996). This serves as an indicator of one's socioeconomic status. *Rural/urban status:* We include a dummy variable with 0=urban and 1=rural to control for the salient rural-urban disparities in China (Wu and Treiman 2004).

3.4 Sample issues

As discussed in Section 3.1, in order to accurately specify the population under the influence of local marriage market conditions, we restrict the sample to a relatively immobile, young and single-person-dominant population. We do not see this as a severe challenge to the validity of the results.

On the one hand, China is a country with tremendous internal migration, some of which is driven by economic incentives and high economic uncertainty (Wu and Treiman 2004). Correspondingly, those individuals who choose to remain at their places of origin tend to be more conservative and consequently are more likely to conform to existing norms (Jokela 2009). Therefore, their immobility should lead to higher prevalence of universal marriage and lower likelihood of exogamy. On the other hand, young people are often more open to social changes and are also more likely to challenge existing rules and norms (McCrae et al. 1999). Thus, the disproportionately higher percentage of young adults may predict lower marriage rates and a higher incidence of exogamy. We expect the above two forces of opposing directions to counteract each other.

Appendix Tables 1 and 2 show descriptive statistics, respectively based on the analytical (more restricted) sample and the descriptive (less restricted) sample, as aforementioned. As can

be seen from Appendix Table 1, compared to those in Appendix Table 2, for both genders, percentages of exogamy are consistently lower while percentages of singleness are universally higher. This is consistent with our above speculations on the sample restrictions. First, the low residential mobility in the more restricted sample may indicate a disproportionately higher percentage of Hui who are more conservative than a typical Hui Muslim. Hence, they tend to remain single so as to avoid exogamy, which leads to the high percentage of singleness and the low percentage of exogamy.

Additionally, this sample includes a disproportionately higher proportion of younger people. Although they may not choose singleness eventually, they may delay marriage for a while to avoid exogamy. Therefore, we expect an underestimation of the ratio of exogamy over singleness, with less exogamy and more singleness.

Aside from the above differences, Appendix Tables 1 and 2 show similar patterns of variation in percentages of exogamy and singleness. The distributions of other variables are also comparable. This indicates that except for the disproportionately higher percentage of immobile and young individuals, our more restricted analytical sample is a reasonable representation of the larger descriptive sample.

4. Results

4.1 Descriptive statistics

Table 1 presents various marital outcomes by quartiles of the corresponding population distribution of Hui, separately for men and women. Specifically, to reflect the norm of universal and early marriage, we present percent never married by age 25, percent never married by age 30 and age at first marriage among all Hui, and to echo the norm of endogamy, we compute percent exogamy among married Hui. As can be seen, for both genders, all four indicators are lower in places with higher Hui concentrations. This indicates that with Hui concentration increasing, both the opportunities to meet potential spouses within the Hui population and the cultural pressures to pursue universal marriage and endogamy rise.

Table 1. Distribution of Hui's Marital Outcomes by Quartiles of Hui Concentration Level

Hui Concentration	Male (N=514,474)					Female (N=490,684)				
	%Hui among Local Population	% Never Married by Age 25	% Never Married by Age 30	Age at 1st Marriage	% Exogamy among Married	%Hui among Local Population	% Never Married by Age 25	% Never Married by Age 30	Age at 1st Marriage	% Exogamy among Married
Low-Q1	0.05	35.00	28.57	25.04	74.07	0.04	14.29	3.70	22.93	75.86
Medium Low-Q2	0.10	27.85	13.56	24.75	60.00	0.09	12.31	3.57	23.59	60.00
Medium High-Q3	0.48	16.41	9.94	24.39	32.62	0.45	7.02	1.95	22.82	31.18
High-Q4	3.88	9.07	3.68	22.73	8.32	3.98	4.33	1.82	20.78	7.84
All	1.13	10.56	4.86	22.96	12.18	1.14	4.85	1.88	21.04	11.51

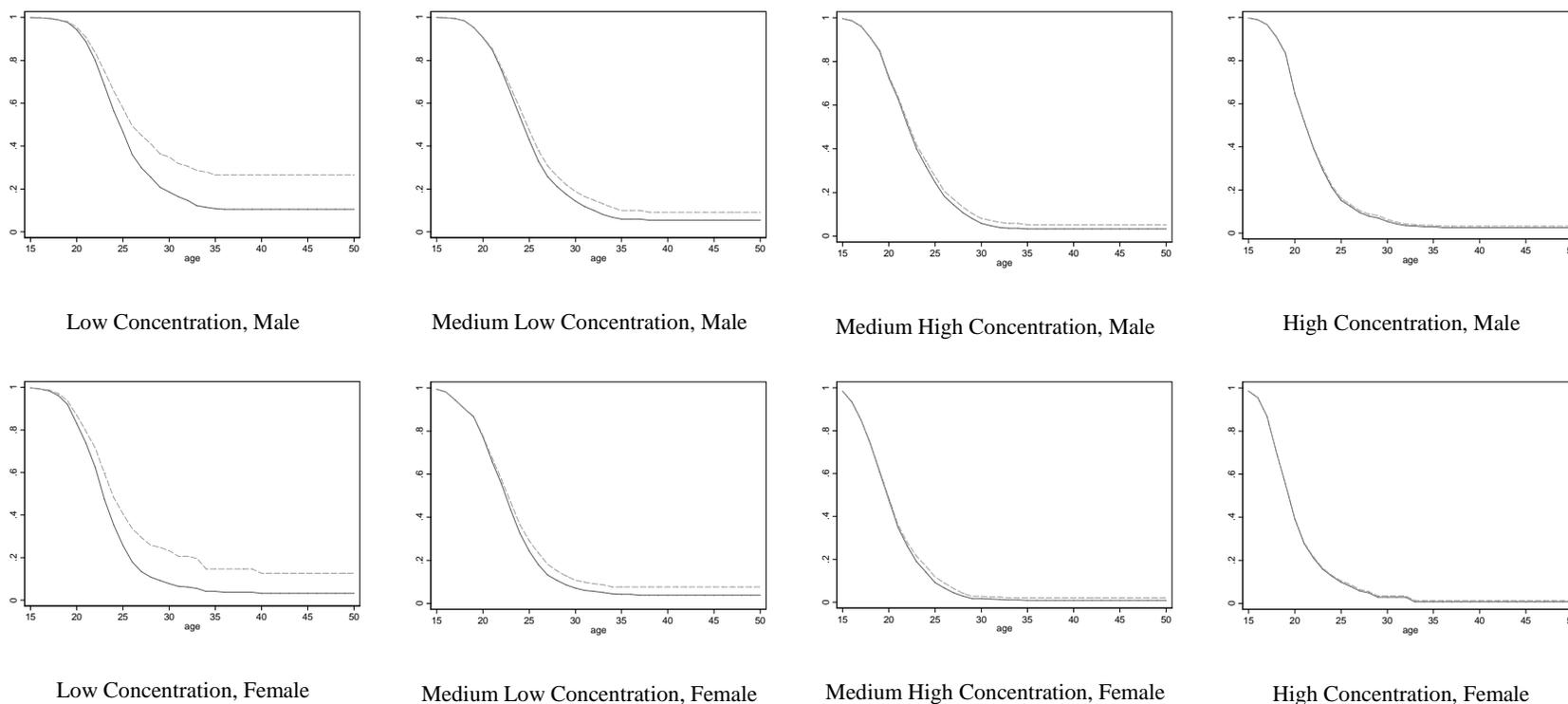
Source: China 2005 1% Inter-Census Survey.

Note: All statistics are calculated based on a larger sample with restriction to population aged 15-50. N=1,005,158. % Hui among local population is calculated by dividing population of Hui by the total local population. % never married by age 25, % never married by age 30 and age at first marriage are calculated among population of Hui. % Exogamy among married is computed as percent exogamy among all married Hui.

Comparing across genders, at all quartiles of Hui concentration, women are much less likely than men to remain single by both ages 25 and 30 and tend to marry younger than men do. Note that the variations in percent never married for both ages are much smaller for women than for men across all levels of Hui concentration, especially for age 30. Specifically, while a range of 3.68 to 28.57 percent of men never marry, only 1.82 to 3.70 percent of women remain single. This indicates that all Hui women are more strongly constrained regarding the norm of universal marriage, regardless of the specific Hui concentrations, which makes little room for the variations in Hui concentration to have a sizable effect. Men, on the other hand, are more responsive to the change in contextual conditions. That is, in places with lower Hui concentrations, they are much freer to stay single than their female counterparts and the gender gap shrinks with higher Hui concentrations. For the norm of endogamy, based on percent choosing exogamy among married Hui, women are less likely to choose exogamy than men except in places with low Hui concentrations, though in general, both the percentages and the slope of change are highly similar for both genders. In sum, the above comparisons indicate that compared to Hui men, Hui women are more severely constrained by the norm of universal and early marriage regardless of the local marriage market conditions, but may be equally restricted by the norm of endogamy.

In Figure 1, we provide a more systematic presentation of the relationship between various marital outcomes by showing the Kaplan-Meier survival curves of Hui's marital choices across age and Hui concentrations, respectively for men and women.

Figure 1. Kaplan-Meier Survival Curves of Marital Choices along Age, by Hui Concentration and Gender



Probability of Remaining Single	—————
Probability of Remaining Single or Choosing Exogamy	- - - - -

Kaplan-Meier estimate is a nonparametric estimate of the survival function. For example, we let n_t be the number of observations still remaining single at time t , d_t the number of observations getting married at time t . The Kaplan-Meier estimate of the survival function is

$$S(t) = \prod_{t_i \leq t} (n_i - d_i) / n_i \quad (1)$$

and the area below the curve shows the probability of remaining single. Specifically, in Figure 1, the area under the lower curve shows the probability of remaining single, with d_t being the number of observations getting married at age t , and the area under the upper curve shows the probability of either remaining single or choosing exogamy, with d_t denoting the number of observations choosing endogamy at age t . Correspondingly, the gap between the two curves presents the probability of choosing exogamy.

As can be seen, the patterns shown are consistent with the results in Table 1. With a higher Hui concentration, both percent married and percent endogamy are higher while percent exogamy is lower. Moreover, single Hui “drain out” much faster with shorter “waiting time” in places with higher Hui concentrations, as demonstrated by the steeper drop of the curves. In addition, compared to men, women have a consistently higher percent married, higher percent endogamy, lower percent exogamy, and shorter “waiting time.”

To gain a clearer understanding, in Figure 2, we present the geographical distributions of Hui concentration, percent never married by age 30 among Hui, age at first marriage among Hui, and percent exogamy among married Hui, at the province level. Consistent with the patterns shown in Table 1, in places with higher Hui concentrations, percent exogamy, percent never married by age 30 and age at first marriage are all lower.

To further support these patterns at the aggregate level, Table 2 shows correlations between the aggregate-level Hui concentration and various marital outcomes. As can be seen, both at the prefecture level and at the province level, the correlations are all negative. That is, both sets of results at the aggregate level in Figure 2 and Table 2 show similar patterns to those at the individual level, as shown in Table 1 and Figure 1. This indicates the robustness of the results.

Figure 2. Geographical Distribution of Hui’s Marital Outcomes at the Province Level

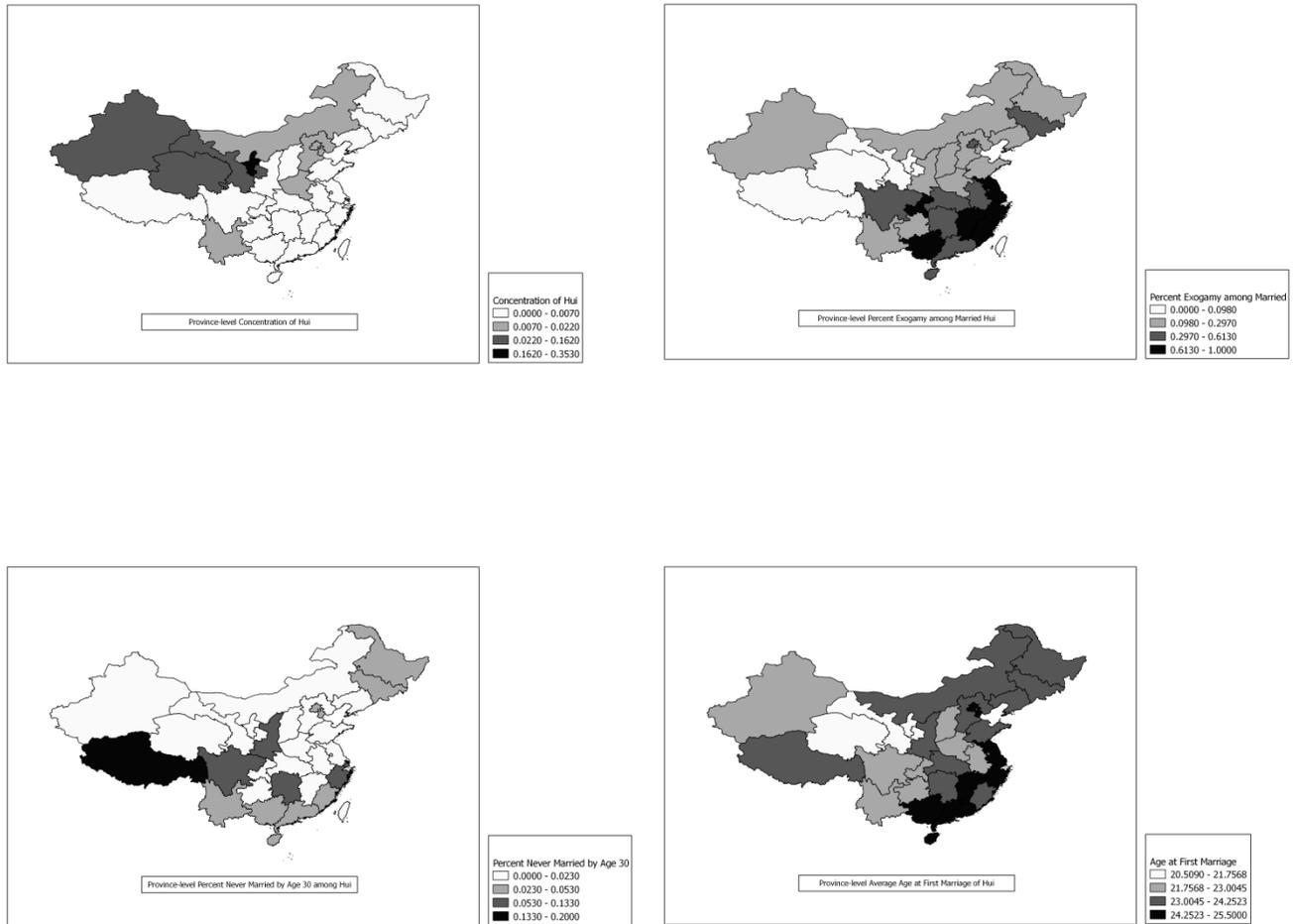


Table 2. Correlations between Concentration of Hui and Hui’s Marital Outcomes

		% Never Married by Age 30	Age at 1st Marriage	%Exogamy among Married
Hui Concentration	Prefecture-level	-0.0423	-0.3188	-0.1460
	Province-level	-0.2318	-0.5922	-0.3838

Source: China 2005 1% Inter-Census Survey.

Note: All statistics are calculated based on a larger sample with restriction to population aged 15-50. N=1,005,158. Concentration of Hui is calculated by dividing population of Hui by the total local population. % never married by age 30 and age at first marriage are calculated among population of Hui. % Exogamy among married is computed as percent exogamy among all married Hui.

4.2 Marry or not?

Table 3 shows results for the marital outcome of married or single, i.e., the total marriage rate, for men and women respectively. As can be seen from Models 1-M and 1-F, for both men and women, local concentration of Hui has positive effects on the logged odds of married over single. If we test on the gender difference, while the intercept is significantly larger for women than for men, the coefficient on the Hui concentration is significantly smaller. This echoes the patterns shown in Table 1. That is, women are more strictly constrained by the norm of universal marriage than men, regardless of the contextual conditions, and this leaves little room for their marriage rates to vary across Hui concentrations. On the other hand, with men's larger variation in marriage rates, their decisions on whether to marry are more responsive to the changing marriage market conditions.

Table 3. Local Marriage Market Conditions and Marital Choices for Hui:
Total Marriage Rate and Choice of Exogamy over Endogamy Conditional on Being Married

	Male		Female		Gender Difference (ref.=male)	
	Model 1-M	Model 2-M	Model 1-F	Model 2-F	Model 1	Model 2
	Married/Single	Exogamy/Endogamy	Married/Single	Exogamy/Endogamy	Married/Single	Exogamy/Endogamy
Local concentration	2.723 *** (0.341)	-7.724 *** (1.683)	1.237 ** (0.363)	-10.813 *** (2.172)	-1.486 ** (0.498)	-3.089 (2.748)
Age	1.811 *** (0.134)	0.825 (0.554)	1.741 *** (0.135)	-0.053 (0.432)	-0.070 (0.190)	-0.878 (0.703)
Age squared	-0.032 *** (0.003)	-0.013 (0.010)	-0.033 *** (0.003)	0.003 (0.008)	-0.001 (0.004)	0.017 (0.013)
Years of schooling	0.015 (0.016)	0.141 ** (0.052)	-0.091 *** (0.017)	0.182 ** (0.059)	-0.106 *** (0.023)	0.041 (0.079)
Rural residence (reference=urban)	0.144 (0.134)	-0.474 (0.435)	0.005 (0.144)	-0.161 (0.460)	-0.139 (0.197)	0.313 (0.633)
Constant	-28.304 *** (1.683)	-14.230 + (7.384)	-24.318 *** (1.557)	-2.961 (5.279)	3.986 + (2.293)	11.269 (9.077)
Observations	2,804		2,399		5,203	
Person-years	19,005		13,322		32,327	
Chi-square	624.49		526.64		1177.46	
DF			5		5	

Source: China 2005 1% Inter-Census Survey.

Note: The top entries are logit coefficients. Standard errors are in parentheses. Models 1-M and 1-F show results from the discrete-time hazard models; Models 2-M and 2-F show results from the binary logit models. †p<0.10; *p<.05; **p<.01; ***p<.001 (two-tailed tests).

The coefficients on age and age squared are similar for men and women. That is, before the late 20s,⁵ age promotes marriage with decreasing slopes; after that, however, Hui are less likely to marry with aging.

While years of schooling have no significant influence on the total marriage rate for men, women with higher education are less likely to get married. This may imply a more liberal attitude toward marriage with higher education. However, if this is the case, it is surprising that the same pattern is not apparent for men. Thus, this pattern for women may indicate that highly educated women face an even more restricted pool of potential marriage candidates than their less educated female counterparts.

4.3 Endogamy and exogamy as a choice conditional on getting married

Aside from the norm of universal marriage, another norm of marriage based on Islam is that of endogamy. As aforementioned, for the choice of exogamy, we need to consider the heterogeneities among individuals. While some of them are fortunate enough to realize their marital preferences by finding the partner of their preferred type, and will only be confronted with the choice between endogamy and exogamy conditional on getting married, some others may see endogamy and exogamy as independent alternatives to being single. Accordingly, we apply two different modeling approaches to capture these two types of individuals.

For those who have succeeded in finding the spouses of their preferred type, that is, those who consider endogamy and exogamy as a choice conditional on getting married, we use the outcome variable of exogamy versus endogamy with binary logit models. Models 2-M and 2-F show results based on this approach. For both men and women, coefficients on Hui concentration are significantly negative. This indicates that for those who are able to fulfill their marital preferences, conditional on getting married, endogamy is definitely the dominant option. In addition, women's coefficient on Hui concentration, though larger, is not significantly different from that of men. This means that men and women are equally constrained by the norm of endogamy.

Moreover, with higher education, both men and women are more likely to pursue exogamy over endogamy, and the gender difference is insignificant. This indicates that education can liberate both men and women from the restriction to endogamy, which adds up to evidence that men and women are similarly constrained by the norm of endogamy.

⁵ To compute the specific age at which the age effects change directions, we take derivatives of the regression equation on age and set it to zero so as to get the peaks. For men, the age is 28.3 and for women, it is 26.4.

4.4 Endogamy and exogamy as independent alternatives to being single

There remain, however, people who are unable to find their preferred spouses. Due to the potential competition between the norm of universal marriage and the norm of endogamy, they may see exogamy and endogamy as parallel options to being single. How will they respond to varying contextual conditions? Table 4 shows results from the discrete-time hazard models with the pair of outcome variables, endogamy or singleness, and exogamy or singleness, separately for men and women. This set of models is based on the assumption that endogamy and exogamy are independent alternatives to being single.

	Male		Female		Gender Difference (ref.=male)	
	Model 3-M	Model 4-M	Model 3-F	Model 4-F	Model 3	Model 4
	Endogamy/Single	Exogamy/Single	Endogamy/Single	Exogamy/Single	Endogamy/Single	Exogamy/Single
Local concentration	3.111 *** (0.364)	-0.906 (1.326)	1.466 *** (0.386)	-3.348 * (1.638)	-1.645 ** (2.747)	-2.442 (2.107)
Age	1.929 *** (0.157)	2.369 *** (0.382)	2.010 *** (0.177)	1.976 *** (0.307)	0.081 (0.237)	-0.393 (0.491)
Age squared	-0.035 *** (0.003)	-0.040 *** (0.007)	-0.040 *** (0.004)	-0.035 *** (0.006)	-0.004 (0.005)	0.005 (0.009)
Years of schooling	-0.009 (0.018)	0.128 *** (0.035)	-0.118 *** (0.019)	0.014 (0.038)	-0.110 *** (0.026)	-0.114 * (0.052)
Rural residence (reference=urban)	0.191 (0.145)	-0.421 (0.391)	-0.030 (0.156)	-0.179 (0.421)	-0.221 (0.213)	0.242 (0.574)
Constant	-29.321 *** (1.937)	-39.732 *** (5.204)	-26.768 *** (1.966)	-30.985 (3.910) ***	2.553 (2.760)	8.748 (6.509)
Observations	2,734		2,328		5,062	
Person-years	18,089		12,532		30,621	
Chi-square	511.91		447.13		981.73	
DF	5				5	

Source: China 2005 1% Inter-Census Survey.

Note: The top entries are logit coefficients. Standard errors are in parentheses. Models 3-M, 3-F, 4-M, and 4-F show results from the discrete-time hazard models. †p<0.10; *p<.05; **p<.01; ***p<.001 (two-tailed tests).

As Models 3-M and 3-F show, for both men and women, coefficients on the local concentration of Hui for the logged odds of endogamy over singleness are positive, with men having larger coefficients. Women's larger intercept, though not significant, echoes the patterns

shown in Table 1 and by Models 1-M and 1-F in Table 3. That is, since women are more likely to get married and to choose endogamy at all concentration levels than are men and since endogamy comprises the majority of all marriages, men have room to be more responsive to variations in Hui concentration.

However, as we move to Models 4-M and 4-F, the coefficient on Hui concentration for the logged odds of exogamy over singleness, though negative for both genders, is only significant for women. Moreover, the gender difference is not significant, which means that even the significant depressing effect of Hui concentration on choosing exogamy for women may not be very robust, especially considering its low significance level. This implies coexistence and competition between the two norms. That is, in places with higher Hui concentrations, both the norm of universal marriage and the norm of endogamy get stronger. While some Hui may stay single for a possible endogamy in the future, others may sacrifice the religious purity so as to fulfill the expectation of universal marriage. Therefore, especially for those who place endogamy, exogamy and singleness as parallel options, the link between Hui concentration and the choice between exogamy and singleness is uncertain and indefinite.

To put things in perspective, note that in Table 3, the coefficients for Hui concentration in Models 2-M and 2-F not only are both significantly negative, but also have higher significance levels than those in Models 4-M and 4-F. This comparison indicates that the choice between exogamy and delay of marriage or singleness is less evident and definitive than the choice between exogamy and endogamy. To be more concrete, those who find the spouse of their preferred type, when the opportunities to meet their potential spouses increase and when the norm of endogamy becomes stronger in places with higher Hui concentrations, are definitely more likely to marry other Hui, rather than non-Hui. However, those who are still in the process of mate selection, being exposed to both the norm of universal marriage and the norm of endogamy, may find it difficult to make a decision. Should they delay marriage further or even stay single for good so as to avoid exogamy? Or should they disregard the ethnicity of their spouse and get married anyway, so as to fulfill the norm of universal and young marriage? The competition between the two norms may lead to both positive and negative links running from Hui concentrations to the logged odds of exogamy over singleness, which may result in the low significance in Models 4-M and 4-F.

In addition, the coefficients for years of schooling show gender differences for both outcomes of endogamy over singleness and exogamy over singleness. As shown, for the logged odds of endogamy over singleness, the coefficients for years of schooling are both negative for men and women, though only significant for women. And the gender difference is significant. Similar to that for the outcome of married versus singleness, this could indicate a shrunken “pool of eligibles” for highly educated Muslim women. Nevertheless, for the logged odds of exogamy over singleness, the coefficient for years of schooling is only significant for men, though positive for both genders. Again, the gender difference is significant. This result shows that education plays a lesser role in women’s tendency to choose exogamy over singleness than education for men. This implies that even for highly educated women, exogamy is still a taboo that can hardly be overridden, much more so than for their male counterparts. This provides some evidence for the speculation that women are more constrained by the norm of endogamy than are men. Finally, coefficients for age and age squared show similar patterns for men and women.

5. Conclusions and Discussion

This paper considers how Hui’s marital choices among endogamy, exogamy and singleness vary across conditions of local ethnic marriage markets. Specifically, we explore the relative strengths of the two norms regarding marriage for Hui Muslims – universal marriage, and endogamy. We also examine how the restrictiveness of the norms differs for men and women. We measure conditions of the local marriage market by prefecture-level concentrations of Hui. We investigate the influence of local Hui concentration on various marital choices using both the discrete-time event history model and the binary logit model, based on a random sample of the China 2005 mini-census data. In order to reflect the actual marriage market conditions that have influenced marital outcomes, the China census in 2000 is used to measure the local contextual conditions.

Both the descriptive and the analytical results show that in places with higher Hui concentrations, Hui tend to have higher marriage rates and to marry earlier and more endogamously, for both men and women. For the choice of exogamy, the results are more nuanced. Conditional on being married, the logged odds of exogamy over endogamy is significantly lower in places with higher Hui concentrations; nevertheless, if we treat exogamy as an alternative to being single, the coefficient on the logged odds of exogamy over singleness is significant only for women, and only slightly. This indicates the coexistence of and the competition between the two norms.

For the comparison across gender, women have consistently higher marriage rates than men do, regardless of the level of Hui concentration. This means that women are universally constrained more strictly than men by the norm of universal marriage, although men are more responsive to the change in Hui concentrations with their larger variation in marriage rates. Coefficients on both logged odds of exogamy over endogamy and exogamy over singleness show no significant gender difference, which implies that men and women are equally restricted by the norm of endogamy. However, the coefficients on education lend some insight on the gender differences in the implementation of the norm of endogamy. While higher education can bring women some freedom to stay single, it is not associated with more exogamy for them. Men with higher education, on the other hand, are more likely to pursue exogamy. This may be due to the fact that exogamy is a more prohibitive taboo for women than for men (Khairabadi 1982).

There are some limitations in this study. First, although we try to provide some theoretical implications for the relative strengths of the two norms of marriage, which should facilitate a cultural perspective on the contextual effects, we still cannot directly test between the two norms, or between the structural and cultural influences. Existing research strategies to execute the above two tasks can hardly work for Hui considering the limited data availability on them. Second, as discussed earlier, our sample is composed of disproportionately higher percentages of the young, single, and immobile population. Although we do not think this is a problem, it is still useful to assess our research questions based on a more representative sample. At this time, simple solutions to this issue are not available, due to the small percentage of Hui in the population and the active internal migration in China. Third, as shown in Appendix Table 2, different types of exogamy, i.e., exogamy with different ethnic groups, may have varying links with marriage market conditions. Again, due to data limitations, this more nuanced analysis is not possible at the time. All the above limitations can serve as future research agendas when sufficient data become available. Last, marital choices could be affected by multiple individual characteristics (Kalmijn 1991, 1998), and people may match on various traits with different priorities (e.g., Davis 1941; Fishman et al. 2008; Merton 1941; Qian and Preston 1993; Rosenfeld 2005, 2008; Schoen and Cheng 2006; Schoen and Wooldredge 1989). In the future, we can study how other domains of marriage market conditions (for example, regarding education, occupation, and language) influence the patterns of marital choices, aside from ethnicity.

To sum up, this study has examined the contextual influence on individuals' marital choices in a unique Chinese Muslim group, it has also facilitated a cultural perspective by evaluating the relative strengths of the two norms regarding marriage, through the comparison between the relative likelihood of different marital outcomes across Hui concentrations and gender. The abovementioned limitations will serve as good starting points for the future development of other studies on this topic.

References

- Abbasi-Shavazi, Mohammad Jalal, and Peter McDonald. 2008. "Family Change in Iran: Religion, Revolution, and the State." Pp. 177-198 in *International Family Change: Ideational Perspectives*, edited by R. Jayakody, A. Thornton and W. G. Axinn. New York: Lawrence Erlbaum Associates.
- Barber, Jennifer S. 2004. "Community Social Context and Individualistic Attitudes toward Marriage." *Social Psychology Quarterly* 64: 101-127.
- Blau, Peter M. 1977. *Inequality and Heterogeneity: A Primitive Theory of Social Structure*. New York: Free Press.
- Blau, Peter M., Terry C. Blum, and Joseph E. Schwartz. 1982. "Heterogeneity and Inter-marriage." *American Sociological Review* 47: 45-62.
- Blau, Peter M. and Joseph E. Schwartz. 1997. *Crosscutting Social Circles: Testing a Macrostructural Theory of Intergroup Relations*. New Brunswick: Transaction Publishers.
- Cheng, Siwei and Yu Xie. 2013. "Structural Effect of Size on Interracial Friendship." *Proceedings of the National Academy of Sciences (PNAS)* 110: 7165-7169.
- China Data Center. 2005. *China 2005 1% Population Survey Data Assembly*. University of Michigan, Ann Arbor, MI [database online]. Retrieved November 1, 2010 (<http://chinadataonline.org/member/census2005/ybListDetail.asp?ID=3>).
- Coleman, James. 1990. *Foundations of Social Theory*. Cambridge: Harvard University Press.
- Davis, Kingsley. 1941. "Inter-marriage in Caste Societies." *American Anthropologist* 43: 376-395.
- Dharmalingam, Arunachalam. 1996. "The Social Context of Family Size Preferences and Fertility Behavior in a South Indian Village." *Genus* 52: 83-103.
- Fishbein, Martin and Icek Ajzen. 2010. *Predicting and Changing Behavior: The Reasoned Action Approach*. New York: Psychology Press.
- Fishman, Raymond, Sheena S. Iyengar, Emir Kamenica, and Itamar Simonson. 2008. "Racial Preferences in Dating." *The Review of Economic Studies* 75: 117-132.
- Fu, Vincent K. 2001. "Racial Inter-marriage Pairings." *Demography* 38: 147-159.
- Hai, Han. 2010. "An Analysis of the Causes of Hui's Population Dispersion (qian xi hui zu ren kou fen bu guang fan de yuan yin)" (in Chinese). *Legal System and Society (Fa Zhi Yu She Hui)* 14: 174-175.
- Hannum, Emily, Meiyang Wang, and Jennifer Adams. 2008. "Urban-Rural Disparities in Access to Primary and Secondary Education under Market Reform." Pp. 125-146 in *One Country, Two Societies? Rural-Urban Inequality in Contemporary China*, edited by M. K. Whyte. Cambridge: Harvard University Press.
- Harris, David R. and Hiromi Ono. 2005. "How Many Interracial Marriages Would There be if All Groups were of Equal Size in All Places? A New Look at National Estimates of Interracial Marriage." *Social Science Research* 34: 236-251.
- Jayakody, Rukmalie, Arland Thornton, and William G. Axinn. 2008. *International Family Change: Ideational Perspectives*. New York: Lawrence Erlbaum.
- Jennings, Elyse A. and Jennifer S. Barber. 2013. "The Influence of Neighbors' Family Size Preference on Progression to High Parity Births in Rural Nepal." *Studies in Family Planning* 44: 67-84.
- Jokela, Markus. 2009. "Personality Predicts Migration within and between U.S. States." *Journal of Research in Personality* 43: 79-83.
- Kalmijn, Matthijs. 1991. "Shifting Boundaries: Trends in Religious and Educational Homogamy." *American Sociological Review* 56: 786-800.

- . 1998. "Intermarriage and Homogamy: Causes, Patterns, Trends." *Annual Review of Sociology* 24: 395-421.
- Kalmijn, Matthijs and F. Van Tubergen. 2010. "A Comparative Perspective on Intermarriage: Explaining Differences among National-Origin Groups in the United States." *Demography* 47: 459-479.
- Katz, Jennifer, Thomas E. Joiner Jr., and Paul Kwon. 2002. "Membership in a Devalued Social Group and Emotional Well-being: Developing a Model of Personal Self-esteem, Collective Self-esteem, and Group Socialization." *Sex Roles* 47: 419-431.
- Kennedy, Ruby Jo Reeves. 1943. "Premarital Residential Propinquity and Ethnic Endogamy." *American Journal of Sociology* 48: 580-584.
- Khairabadi, Ma-il. 1982. *Status of Woman in Islamic Society*. Rampur, India: Maktaba Hijab.
- Lewis, Susan K. and Valerie K. Oppenheimer. 2000. "Educational Assortative Mating across Marriage Markets: Non-Hispanic Whites in the United States." *Demography* 37: 29-40.
- Lichter, Daniel T. 1990. "Delayed Marriage, Marital Homogamy, and the Mate Selection Process among White Women." *Social Science Quarterly* 74: 802-811.
- Lichter, Daniel T., Robert N. Anderson, and Mark D. Hayward. 1995. "Marriage Markets and Marital Choice." *Journal of Family Issues* 16: 412-431.
- Lichter, Daniel T., Felicia B. LeClere, and Diane K. McLaughlin. 1991. "Local Marriage Markets and the Marital Behavior of Black and White Women." *American Journal of Sociology* 96: 843-867.
- Lichter, Daniel T., Diane K. McLaughlin, George Kephart, and David J. Landry. 1992. "Race and the Retreat from Marriage: A Shortage of Marriageable Men?" *American Sociological Review* 57: 781-799.
- Lipman, Jonathan N. 1997. *Familiar Strangers: A History of Muslims in Northwest China*. Seattle: University of Washington Press.
- Ma, Jinbao. 2000. "An Analysis of Features of Hui's Regional Distribution – Comparison with Several Other Nationalities (hui zu ren kou fen bu de di yu te zheng jian xi -- yu qi ta ji ge shao shu min zu de bi jiao)" (in Chinese). *Journal of Hui Muslim Minority Studies (Hui Zu Yan Jiu)* 4: 9-14.
- McCrae, Robert R., Paul T. Costa, Jr., Margarida Pedroso de Lima, Antonio Simões, Fritz Ostendorf, Alois Angleitner, Iris Marusić, Denis Bratko, Gian Vittorio Caprara, Claudio Barbaranelli, and Joon-Ho Chae. 1999. "Age Differences in Personality across the Adult Life Span: Parallels in Five Cultures." *Developmental Psychology* 35: 466-477.
- Mackerras, Colin. 1998. "Han-Muslim and Intra-Muslim Social Relations in Northwestern China." *Nationalism and Ethnic Politics* 4: 28-46.
- Mamet, Rizvan, Cardell K. Jacobson, and Tim B. Heaton. 2005. "Ethnic Intermarriage in Beijing and Xinjiang, China, 1990." *Journal of Comparative Family Studies* 36: 187-204.
- Mernissi, Fatima. 1996. *Women's Rebellion and Islamic Memory*. London and New Jersey: Zed Books.
- Merton, Robert K. 1941. "Intermarriage and the Social Structure: Fact and Theory." *Psychiatry* 4: 361-374.
- Morgan, S. Philip, Sharon Stash, Herbert L. Smith, and Karen Oppenheim Mason. 2002. "Muslim and Non-Muslim Differences in Female Autonomy and Fertility: Evidence from Four Asian Countries." *Population and Development Review* 28: 515-537.
- Qian, Zhenchao. 1997. "Breaking the Racial Barriers: Variations in Interracial Marriage between 1980 and 1990." *Demography* 34: 263-276.
- Qian, Zhenchao and Daniel T. Lichter. 2007. "Social Boundaries and Marital Assimilation: Interpreting Trends in Racial and Ethnic Intermarriage." *American Sociological Review* 72: 68-94.

- Qian, Zhenchao and Samuel H. Preston. 1993. "Changes in American Marriage, 1972 to 1987: Availability and Forces of Attraction by Age and Education." *American Sociological Review* 58: 482-495.
- Raley, R. Kelly. 1996. "A Shortage of Marriageable Men? A Note on the Role of Cohabitation in Black-White Differences in Marriage Rates." *American Sociological Review* 61: 973-983.
- Rosenfeld, Michael J. 2005. "A Critique of Exchange Theory in Mate Selection." *American Journal of Sociology* 110: 1284-1325.
- . 2008. "Racial, Educational and Religious Endogamy in the United States: A Comparative Historical Perspective." *Social Forces* 87: 1-31.
- Schoen, Robert. 1983. "Measuring the Tightness of a Marriage Squeeze." *Demography* 20: 61-78.
- . 1988. *Modeling Multigroup Populations*. New York: Plenum Press.
- Schoen, Robert and Yen-Hsin A. Cheng. 2006. "Partner Choice and the Differential Retreat from Marriage." *Journal of Marriage and Family* 68: 1-10.
- Schoen, Robert and James R. Kluegel. 1988. "The Widening Gap in Black and White Marriage Rates: The Impact of Population Composition and Differential Marriage Propensities." *American Sociological Review* 53: 895-907.
- Schoen, Robert and John Wooldredge. 1989. "Marriage Choices in North Carolina and Virginia, 1969-71 and 1979-81." *Journal of Marriage and Family* 51: 465-481.
- Schoen, Robert, John Wooldredge, and Barbara Thomas. 1989. "Ethnic and Educational Effects on Marriage Choice." *Social Science Quarterly* 70: 617-630.
- Thornton, Arland. 2001. "The Developmental Paradigm, Reading History Sideways, and Family Change." *Demography* 38: 449-465.
- . 2005. *Reading History Sideways: The Fallacy and Enduring Impact of the Developmental Paradigm on Family Life*. Chicago: University of Chicago Press.
- Thornton, Arland, William G. Axinn, and Yu Xie. 2010. *Marriage and Cohabitation*. Chicago: University of Chicago Press.
- Troyer, Lisa and C. Wesley Younts. 1997. "Whose Expectations Matter? The Relative Power of First- and Second-order Expectations in Determining Social Influence." *American Journal of Sociology* 103: 692-732.
- Wu, Xiaogang and Donald Treiman. 2004. "The Household Registration System and Social Stratification in China, 1955-1996." *Demography* 41: 363-384.
- Xie, Yu and Emily Hannum. 1996. "Regional Variation in Earnings Inequality in Reform-Era Urban China." *The American Journal of Sociology* 101: 950-992.
- Xie, Yu, James M. Raymo, Kimberly Goyette, and Arland Thornton. 2003. "Economic Potential and Entry into Marriage and Cohabitation." *Demography* 40: 351-367.
- Zang, Xiaowei. 2005. "Hui Muslim – Han Chinese Differences in Perceptions on Endogamy in Urban China." *Asian Ethnicity* 6: 51-68.
- . 2006. "Ethnic Differences in Neighbourly Relations in Urban China." *Asian Ethnicity* 7: 195-207.
- . 2012. *Islam, Family Life, and Gender Inequality in Urban China*. London and New York: Routledge.
- Zeng, Zhen and Yu Xie. 2008. "A Preference-Opportunity-Choice Framework with Applications to Intergroup Friendship." *American Journal of Sociology* 114: 615-648.
- Zhou, Jianxin. 2001. "Exogamy and Endogamy during Hui's Formation and Development (hui zu xing cheng fa zhan guo cheng zhong de zu ji zu nei tong hun)" (in Chinese). *Journal of Central University for Nationalities (Zhong Yang Min Zu Da Xue Xue Bao)* 28: 52-56.

Appendix

Appendix Table 1. Descriptive Statistics, Analytical Sample (More Restricted)							
Dependent Variable:		All (N=5,203)	SD	Male (N=2,804)	SD	Female (N=2,399)	SD
Marital Choice							
	Single	0.860	0.347	0.872	0.334	0.847	0.360
	Endogamy	0.112	0.316	0.103	0.304	0.123	0.330
	Exogamy	0.027	0.162	0.025	0.156	0.030	0.170
Marital Choice: Detailed							
	Single	0.860	0.347	0.872	0.334	0.847	0.360
	Endogamy	0.112	0.316	0.103	0.304	0.123	0.329
	Exogamy with other 9 Muslim minority	0.001	0.028	0.001	0.038	NA	NA
	Exogamy with 45 non-Muslim minority	0.014	0.117	0.004	0.065	0.025	0.156
	Exogamy with Han	0.012	0.111	0.019	0.137	0.005	0.068
<i>Independent Variables:</i>							
Conditions of Local Marriage Markets							
	Local concentration of Hui	0.167	0.172	0.164	0.169	0.171	0.174
Categorical	Concentration-Q1	0.008	0.005	0.008	0.005	0.008	0.005
	Concentration-Q2	0.039	0.024	0.039	0.024	0.039	0.023
	Concentration-Q3	0.198	0.057	0.199	0.056	0.199	0.059
	Concentration-Q4	0.423	0.076	0.423	0.076	0.424	0.076
Age		20.620	5.368	21.148	5.786	20.003	4.761
Categorical	Age 15-19	0.528	0.499	0.495	0.500	0.566	0.496
	Age 20-24	0.275	0.446	0.272	0.445	0.278	0.448
	Age 25-29	0.129	0.336	0.146	0.353	0.110	0.313
	Age 30+	0.068	0.252	0.087	0.282	0.045	0.208
<i>Control Variables:</i>							
	Years of Schooling	9.453	3.463	9.507	3.228	9.389	3.719
Categorical	Never attend school	0.070	0.255	0.047	0.213	0.096	0.294
	Primary school	0.211	0.408	0.207	0.405	0.216	0.411
	Junior high school	0.373	0.484	0.410	0.492	0.329	0.470
	Senior high school	0.224	0.417	0.229	0.420	0.220	0.414
	Associate college/above	0.122	0.327	0.107	0.309	0.140	0.347
Registration of Residence							
	Rural	0.483	0.500	0.488	0.500	0.478	0.500
	Urban	0.517	0.500	0.512	0.500	0.522	0.500
Source: China 2005 1% Inter-Census Survey.							
Note: All statistics are calculated based on a smaller sample with restrictions stated in the "Data and Methods" section. N=5,203.							

Appendix Table 2. Descriptive Statistics, Descriptive Sample (Less Restricted)							
Dependent Variable:		All (N=11,400)	SD	Male (N=5,799)	SD	Female (N=5,601)	SD
Marital Choice							
	Single	0.397	0.489	0.427	0.495	0.366	0.482
	Endogamy	0.532	0.499	0.503	0.500	0.561	0.496
	Exogamy	0.071	0.258	0.070	0.255	0.073	0.260
Marital Choice: Detailed							
	Single	0.397	0.489	0.427	0.495	0.366	0.482
	Endogamy	0.532	0.499	0.503	0.500	0.561	0.496
	Exogamy with other 9 Muslim minority	0.004	0.063	0.008	0.087	0.000	0.013
	Exogamy with 45 non-Muslim minority	0.036	0.187	0.013	0.115	0.060	0.238
	Exogamy with Han	0.031	0.173	0.049	0.215	0.013	0.112
<i>Independent Variables:</i>							
Conditions of Local Marriage Markets							
	Local concentration of Hui	0.172	0.169	0.170	0.168	0.174	0.170
Categorical	Concentration-Q1	0.009	0.005	0.008	0.005	0.009	0.005
	Concentration-Q2	0.049	0.034	0.049	0.034	0.049	0.033
	Concentration-Q3	0.213	0.053	0.213	0.053	0.212	0.053
	Concentration-Q4	0.419	0.076	0.419	0.076	0.419	0.076
Age		30.235	10.712	30.294	10.785	30.175	10.636
Categorical	Age 15-19	0.242	0.429	0.241	0.428	0.244	0.429
	Age 20-24	0.131	0.337	0.135	0.342	0.127	0.333
	Age 25-29	0.107	0.309	0.106	0.308	0.107	0.310
	Age 30+	0.520	0.500	0.518	0.500	0.522	0.500
<i>Control Variables:</i>							
	Years of Schooling	9.453	3.463	9.507	3.228	9.389	3.719
Categorical	Never attend school	0.152	0.359	0.091	0.287	0.216	0.411
	Primary school	0.259	0.438	0.262	0.440	0.257	0.437
	Junior high school	0.324	0.468	0.374	0.484	0.272	0.445
	Senior high school	0.169	0.375	0.180	0.384	0.158	0.365
	Associate college/above	0.061	0.240	0.060	0.238	0.062	0.242
Registration of Residence							
	Rural	0.497	0.500	0.499	0.500	0.494	0.500
	Urban	0.503	0.500	0.501	0.500	0.506	0.500
Source: China 2005 1% Inter-Census Survey.							
Note: All statistics are calculated based on a larger sample with restriction to Hui population aged 15-50. N=11,400.							



PSC Research Reports

The **Population Studies Center** (PSC) at the University of Michigan is one of the oldest population centers in the United States. Established in 1961 with a grant from the Ford Foundation, the Center has a rich history as the main workplace for an interdisciplinary community of scholars in the field of population studies.

Currently PSC is one of five centers within the University of Michigan's Institute for Social Research. The Center receives core funding from both the Eunice Kennedy Shriver National Institute of Child Health and Human Development (R24) and the National Institute on Aging (P30).

PSC Research Reports are **prepublication working papers** that report on current demographic research conducted by PSC-affiliated researchers. These papers are written for timely dissemination and are often later submitted for publication in scholarly journals.

The **PSC Research Report Series** was initiated in 1981.

Copyrights for all Reports are held by the authors. Readers may quote from this work (except as limited by authors) if they properly acknowledge the authors and the PSC Series and do not alter the original work.

Population Studies Center
University of Michigan
Institute for Social Research
PO Box 1248, Ann Arbor, MI 48106-1248 USA
www.psc.isr.umich.edu