

This paper addresses the question of how the ethnic differences in marital choice vary across ethnic marriage markets. Specifically, it investigates how differences in age at first marriage and probabilities of entering into the first marriage between Hui Muslim and Han Chinese are revised by local ethnic structural constraints and cultural pressures within counties of residence. The former is measured by local sex ratio for unmarried Hui and Han with similar ages, and the latter is measured by two indicators – local ethnic concentrations of Hui and the local ethnic heterogeneity. The study mainly bases on a random sample of China 20051% inter-census survey. To calculate measures of local conditions for different marriage cohorts, census in 1982, 1990 and 2000, and inter-census surveys in 1987, 1995 and 2005 will be used. I will also utilize qualitative analysis of 49 in-depth interviews on family and development conducted in Gansu¹, China in 2008.

Theoretical Motivations and Research Setting

Hui Muslim is one out of ten Muslim nationalities² and fifty-five minority nationalities in China. On one hand, compared to the majority nationality Han, who dominate 91.96 percent of the national population, Hui only constitute 0.74 percent and also possess lower socioeconomic status. On the other hand, as the most widely dispersed minority nationality, Hui speak Chinese and have adopted most of the cultural practices of Han. Except for their Islamic religion, Hui are well acculturated into the majority Han. Therefore, Hui are more likely to be situated in a tension between the desire to retain their own ethnic identity and the necessity to assimilate into the Han culture. It has been widely established that Islamic religion is patriarchal (Morgan et al. 2002) and traditional in family practices (Zang 2005, 2006). Correspondingly, Hui are more likely to marry early and get married in general than Han do. What would happen for the ethnic differences with Hui being located within varying levels and structures of the "tension"? Will the differences shrink with higher tension when Hui are forced to wait longer or even retreat from marriage due to the limited "fields of eligibles" and the strict norms of in-marriage? Will the differences widen with lower tension when Hui can more freely out-marry? Will the changes in the differences be uncertain since the assimilation to Han in the domain of family practice, inflated "fields of eligibles" and mitigated structural pressures to out-marry happen together? These questions and uncertainties justify the necessity and importance of the study.

A body of literature has focused on the relationship between "field of eligibles" within local marriage markets and marital choices. Most of them measure conditions of the local marriage markets either by sex ratios (Lichter et al. 1992; Lichter et al. 1995) or by the local concentrations of specific groups as well as the overall local heterogeneities in terms of age, race/ethnicity, education or economic potentials (Blau et al. 1982; Lewis and Oppenheimer 2000). Most of them interpret conditions of the local marriage markets in terms of structural constraints, that is, the extent to which unmarried people are sufficiently exposed to the opportunities to meet their potential spouses. Moreover, some studies specifically focus on the relationship between concentrations of specific groups and intermarriage (Blau et al. 1982; Mackerras 1998; Mamet et al. 2005; Zang 2005). Most of them follow Blau's (1971) macrostructural proposition that relative group size is a crucial predictor of out-marriage rates for racial minorities and local racial heterogeneity well predicts local intermarriage rates (Blau et al. 1982).

This study contributes to this myriad of literatures by trying to fill two gaps. Firstly, aside from the macrostructural proposition, I try to identify another pathway of the influence of local marriage market conditions on marital choice, that is, cultural pressures. Unmarried minorities may face stronger pressure to out-marry in places with higher concentrations of the ethnic group. This is highly relevant in studying the ethnic differences in marital choice for Hui and Han. Structural constraints perspectives indicate that the levels of limitation in opportunities for Hui to meet potential spouses may affect both their marriage timing and marriage rates. However, the local ethnic marriage markets, in particular, the ethnic composition, can also influence marital choice by exerting community and cultural pressures. We can imagine Hui located in places with lower Hui concentration may face lower pressures to out-marry with Han. We may also expect higher local ethnic heterogeneities may create a more tolerant atmosphere for ethnic intermarriages. Conventionally, all of sex ratios within the specific age and ethnic groups, relative size of specific ethnic group and local ethnic heterogeneity (Blau et al. 1982; Lewis and Oppenheimer 2000) are used to present the structural constraints of mating opportunities. Actually, relative size of ethnic groups and local ethnic heterogeneity can also indicate the potential cultural and community pressure on intermarriage. By controlling for both sex ratios within specific age and ethnic groups and relative size of Hui as well as local ethnic

² Muslim nationalities in China are divided by language. Turkic-speakers: Uygur, Qazak, Tatar, Uzbek, Salar, and Kirgiz; Mongolic-speakers: Dongxiang and Bonan; Persian-speakers: Tajiks; Chinese-speakers: Hui (Lipman 1997).

¹ Gansu is a northwestern province in China with disproportionately higher concentrations of Hui.

heterogeneity, I expect to wash out the structural portions of the explanatory power exerted by the latter two factors while keeping their unique cultural contributions.

Secondly, rather than focusing on intermarriage and assortative mating, this study takes age at first marriage and entry into first marriage as the dependent variable. This may lead to a stronger version of the cultural pressures perspective. Hui tend to marry younger and marry more. In places of higher concentrations of Hui and larger ethnic heterogeneity: on one hand, Hui may face larger "fields of eligibles" and lower pressure to out-marry, so they do not need to marry later or choose non-marriage anymore; then the ethnic gap in marital choice should widen. On the other hand, however, Hui tend to be better assimilated into Han culture in those places, which may lead the gap to narrow. Under the interplay of these two counter-direction forces, if the estimated gap still turns out wider, it is reasonable to claim the existence of strong cultural pressures effects.

In general, I expect in counties with lower sex ratios within the specific ages and within Hui/Han, larger relative size of Hui and lower local ethnic heterogeneity to contribute to the narrowing of the ethnic gap in age at first marriage and entry into first marriages, and vice versa.

Data and Methods

The study mainly bases on a random sample of China 2005 1% inter-census survey. It will be restricted to Hui and Han. OLS will be used with age at first marriage as the dependent variable and Binary Logit models will be used with entry into first marriage as the dependent variable. Two samples with different restrictions will be utilized to model these two marital outcomes. Models will be estimated respectively for males and females in terms of their potential different mechanisms in marital choices (Xie et al. 2003). The dataset does not include information on place of marriage, so the resulting measures of local marriage market conditions based on their current place of residence may not reflect the situations one was actually exposed to. Hence, I will further restrict the data to those who did not leave their place of resident registration and those who lived within the province of residence both one and five years ago. This results in a sample of relatively immobile observations and measures of local marriage markets and ethnic concentrations based on their current county of residence are more suitable to those people.

Dependent Variable 1:

Age at first marriage: for those earlier marriage cohorts, to measure conditions of local marriage markets they were exposed to, additional nationally representative datasets are necessary. The 2005 1% survey data will be restricted to those getting married for the first time between 1980 to 2005 within which period additional national datasets of reliable quality are available (see Table 1).

Table 1. Data Sources for Measures of Local Marriage Markets Conditions, Marriage Cohorts 1980-2005

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Year of Marriage	1980-1984	1985-1988	1989-1992	1993-1997	1998-2002	2003-2005
Data Source	1982 Census	1987 Inter- Census Survey	1990 Census	1995 Inter- Census Survey	2000 Census	2005 Inter- Census Survey

Key Independent Variable: the conditions of ethnic marriage markets. As shown in Table1, I assume relative stability of conditions in ethnic marriage markets within a time span of two to four years. I use 1982 census data, 1987 inter-census survey data, 1990 census data, 1995 inter-census survey data, 2000 census data and 2005 inter-census survey data to estimate conditions of ethnic marriage markets respectively for those getting married in 1980-84, 1985-88, 1989-92, 1993-97, 1998-2002 and 2003-2005. All the measures will be at the county-level. Interaction terms between marriage market condition variables and ethnicity (Han/Hui) will be included to indicate the revisions to the ethnic differences in marital choices exerted by conditions of local ethnic marriage markets. I will also include interactions between structural constraints variable and cultural pressures variables to indicate the combined effects of them on the ethnic difference in marital choices.

Ethnicity: a dummy variable indicating Han or Hui.

Structural Constraints

Sex ratio: the availability of potential mates with similar ages and the same ethnicity (Hui or Han):

$$SRF_{i} = \frac{\sum_{i=1}^{n-1} M_{i}}{\sum_{i=1}^{n} F_{i}}$$
 $SRM_{i} = \frac{\sum_{i=1}^{n-1} F_{i}}{\sum_{i=1}^{n} M_{i}}$

where SRF_i and SRM_i are respectively the ethnicity-specific sex ratio for women and men of age i, M_i is the number of unmarried men (of the same ethnicity: Hui or Han) of age i in the local marriage market, and F_i is the number of unmarried women (of the same ethnicity) of age i in the local marriage market. In terms of the convention of age hypergamy, for females, age range of the potential mates is assumed to start from their own age till m (m \geq 0) years

older (numerator) and they compete with other women of their own age (denominator); for males, age range of the potential mates is assumed to start from $f(f \ge 0)$ years below till their own age (numerator) and they compete with other men of their own age (denominator). Values of m and f will be determined based on the distribution.

Cultural Pressures

Local concentration of Hui: measured by the relative group size of Hui in a given county, this is simply the percent of a county's relevant population of Hui.

Local ethnic heterogeneity: calculated by a specific parameter $H = 1 - \sum_{i} p_i^2$ (Blau et al. 1982), in which p_i is the proportion of the population in a given ethnicity group within the given county.

Other Control Variable:

Education: years of schooling completed. I will recode the years of schooling by: 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 socioeconomic status.

Enrollment: enrolled full-time or not. As widely established, the roles as husbands and wives could be quite contradictory to those as students (Thornton et al. 1995). So the enrollment status may influence the marital choice.

Rural/Urban Status: this is used to control for the salient rural-urban disparities in China.

Province: this is used to control for the marked regional differences in China.

Dependent Variable 2:

Entry into first marriage: since the dataset only includes age at first marriage, I will restrict it to those being single or being in the first marriage from age 15-35 in 2005. This age range is meant to approximate the "atrisk" group for entering into marriage for the first time with the given cross-sectional data (Emily et al. 2008).

Key Independent Variable: in order to more accurately measure the conditions of local ethnic marriage markets at the time of one's marital choice, for those still being single in 2005, I will use 2005 inter-census data for measures of marriage market conditions; for those already being in their first marriage in 2005, I will use corresponding datasets (see Table1) to measure the marriage market conditions in their years of first marriage.

Ethnicity: a dummy variable indicating Han or Hui.

Structural Constraints: Sex ratio. Measured the same way as abovementioned.

Cultural Pressures: Relative group size of Hui; local ethnic heterogeneity. Measured as abovementioned. Other Control Variable:

Age: in order to capture the non-linear effects of age on marital choice, age will be modeled with a spline function with separate parameters for age 15-19, 20-23, 24-28, 29-32, 33-35 (Xie et al. 2003). In order to better approximate the changes in the size of "at-risk" groups, for those still single in 2005, I will use their actual age for this variable; for those already in their first marriage in 2005, I will use their age at first marriage for this variable.

Measures for Education, Enrollment, Rural/Urban Status and Province are the same as abovementioned.

For preliminary results, please see Table2-4. They are provided to indicate how the disparities in both marital choice and socioeconomic status between Hui and Han vary under different levels of ethnic concentrations (with Gansu having higher concentration of Hui than Beijing does).

Table 2. National Ethnic Concentration, Marital Statistics and Socioeconomic Statistics

	Han		Hui		Others	
National	Male	Female	Male	Female	Male	Female
Percentage of Population	44.33	44.58	0.60	0.60	5.02	4.87
Age at First Marriage	24.25	22.06	23.68	21.02	23.51	21.33
Marital Status						
Never Married	22.29	17.54	21.05	20.18	29.02	19.30
First Marriage	71.31	72.74	71.05	69.72	61.51	67.19
Remarried	1.78	1.84	2.63	1.83	4.10	2.95
Divorced	1.19	0.87	1.75	0.92	0.74	1.05
Widowed	3.42	7.00	3.51	7.34	4.63	9.49
Residence Type						
Rural	69.04	70.95	71.43	66.88	84.98	86.69
Urban	30.96	29.05	28.57	33.12	15.02	13.31
Education						
Never Attend School	4.92	12.71	12.14	25.17	13.31	24.56
Primary School	30.77	32.80	40.00	39.16	46.86	43.47
Junior High School	41.66	36.41	29.29	19.58	28.90	22.04
Senior High School	14.96	12.65	11.43	9.79	6.95	6.10
Associate College	4.84	3.73	4.29	4.20	2.88	2.61
Undergraduate	2.71	1.62	2.86	2.10	1.10	1.22
Graduate and above	0.14	0.08	0.00	0.00	0.00	0.00

Sources: A small sample of 2005 1% China Inter-Census Survey (Form R501). N=25,909.

Notes: The dataset used for Table 2-4 is only a trial sample of 2005 1% China Inter-Census Survey. The actual analysis for this paper will be based on a much larger sample with a size of 2,061,325. However, use of that dataset is highly restrictive. For this abstract, I can only use this small trial sample.

Table 3. Ethnic Concentration, Marital Statistics and Socioeconomic Statistics in Gansu

	Han		Hui		Others	
Gansu	Male	Female	Male	Female	Male	Female
Percentage of Population	44.54	43.90	2.12	2.33	2.76	4.35
Age at First Marriage	22.98	20.83	21.14	20.82	21.57	21.33
Marital Status						
Never Married	22.29	13.66	12.50	31.25	12.50	14.29
First Marriage	69.66	77.02	75.00	62.50	75.00	64.29
Remarried	1.86	3.42	0.00	0.00	6.25	7.14
Divorced	0.93	0.00	0.00	0.00	0.00	0.00
Widowed	5.26	5.90	12.50	6.25	6.25	14.29
Residence Type						
Rural	78.95	79.90	89.47	90.91	100.00	95.12
Urban	21.05	20.10	10.53	9.09	0.00	4.88
Education						
Never Attend School	8.79	22.22	42.11	38.10	41.18	65.71
Primary School	37.94	35.35	31.58	33.33	35.29	17.14
Junior High School	36.18	32.32	15.79	23.81	17.65	11.43
Senior High School	12.56	6.57	10.53	4.76	5.88	5.71
Associate College	3.02	3.03	0.00	0.00	0.00	0.00
Undergraduate	1.51	0.51	0.00	0.00	0.00	0.00
Graduate and above	0.00	0.00	0.00	0.00	0.00	0.00

Sources: A small sample of 2005 1% China Inter-Census Survey (Form R501) for Gansu. N=943.

Table 4. Ethnic Concentration, Marital Statistics and Socioeconomic Statistics in Beijing

	Han		Hui		Others	
Beijing	Male	Female	Male	Female	Male	Female
Percentage of Population	44.03	50.66	1.33	1.33	1.11	1.55
Age at First Marriage	25.31	23.53	23.50	23.00	26.00	23.29
Marital Status						
Never Married	27.43	24.24	33.33	0.00	50.00	0.00
First Marriage	68.00	67.68	50.00	75.00	50.00	100.00
Remarried	1.71	1.52	16.67	0.00	0.00	0.00
Divorced	0.57	1.01	0.00	0.00	0.00	0.00
Widowed	2.29	5.56	0.00	25.00	0.00	0.00
Residence Type						
Rural	34.36	36.00	33.33	16.67	40.00	42.86
Urban	65.64	64.00	66.67	83.33	60.00	57.14
Education						
Never Attend School	1.06	5.48	0.00	25.00	0.00	0.00
Primary School	13.23	20.09	0.00	0.00	60.00	0.00
Junior High School	34.92	33.79	33.33	25.00	0.00	71.43
Senior High School	24.87	24.66	33.33	25.00	20.00	14.29
Associate College	11.64	7.31	16.67	25.00	0.00	14.29
Undergraduate	12.70	8.22	16.67	0.00	20.00	0.00
Graduate and above	1.59	0.46	0.00	0.00	0.00	0.00

Sources: A small sample of 2005 1% China Inter-Census Survey (Form R501) for Beijing. N=452.

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