

# **HHS Public Access**

Author manuscript *Res Soc Stratif Mobil.* Author manuscript; available in PMC 2019 August 01.

Published in final edited form as:

Res Soc Stratif Mobil. 2018 August ; 56: 28–39. doi:10.1016/j.rssm.2018.06.002.

# Hukou intermarriage and social exclusion in China

Yu Wang<sup>a,\*</sup> and Christine R. Schwartz<sup>b</sup>

<sup>a</sup>Duke Kunshan University, China

<sup>b</sup>Department of Sociology, University of Wisconsin-Madison, United States

# Abstract

*Hukou* is a key marker of status in contemporary China. Urban *hukou* status confers large economic benefits such as preferential access to good schools, prestigious occupations, and state-subsidized welfare benefits. As such, trends in *hukou* intermarriage convey important but underappreciated information about social mobility in China. This article examines trends in *hukou* intermarriage between 1958 and 2008. We find that *hukou* intermarriage is surprisingly common and has grown steadily since 1985. Hypotheses derived from Western contexts do little to explain this trend. Increased education, economic inequality, and availability each fail to explain trends as predicted in prior work. A common hypothesis is that increased inequality should reduce intermarriage by making it more costly to "marry down." We find the opposite—increasing inequality is associated with increasing *hukou* intermarriage, particularly between urban men and rural women, which is consistent with the hypothesis that the costs of marrying down may be outweighed by the incentives to marry up in this context. Our results also suggest *hukou* conversion plays a key role in increased intermarriage. These findings highlight the uniqueness of the Chinese context and suggest that standard hypotheses about assortative mating may not be applicable in contexts with strong state-controlled social boundaries.

# Keywords

Hukou intermarriage; Urban-rural inequality; Hukou conversion; China; Marriage squeeze

# 1. Introduction

Rural and urban populations around the world have been shown to have notably different values, attitudes, beliefs, lifestyles, and economic and demographic characteristics (Albrecht & Albrecht, 1996; Dodoo & Tempenis, 2002; Hofferth & Iceland, 1998; Lichter & Brown, 2011; Malhotra, 1997; Sicular, Yue, Gustafsson, & Li, 2007). China is a special case in that the urban-rural divide is institutionalized by the *hukou* system. In 1958, the Chinese government assigned a rural or urban *hukou* to all Chinese citizens based on their current residential status (Chan, 2009). After this initial assignment, *hukou* status became hereditary and is passed down from parents to children regardless of where they reside.

<sup>&</sup>lt;sup>\*</sup>Corresponding author at: Duke Kunshan University, No.8 Duke Ave, Kunshan, Jiangsu, 215316, China. yu.wang282@dukekunshan.edu.cn (Y. Wang), cschwart@ssc.wisc.edu (C.R. Schwartz).

Hukou status has important implications for life chances. Urban hukou holders receive preferential access to good schools, prestigious occupations, and state-subsidized welfare benefits (Lu, 2003; Solinger, 1999; Treiman, 2012; Wu & Treiman, 2004). Intermarriage by hukou can thus be seen a barometer of the fluidity of social boundaries separating rural and urban hukou holders. Moreover, because hukou status is inherited from parents, hukou intermarriage has implications for the intergenerational transmission of social status (Han, Li, & Zhao, 2015). Despite its potential importance for stratification and inequality, scholars have only recently begun to study hukou intermarriage (Lui, 2016; Lui, 2017a; Lui, 2017b; Han et al., 2015; Qian & Qian, 2017; Xing & Nie, 2010). One reason for this may be that, given its presumed rarity, hukou intermarriage was assumed to be ignorable (Chan, 2009; Lu, 2003; Zhang, Zhu, & Nyland, 2014). However, recent research suggests that hukou intermarriage may have become more prevalent over time. One reason for this may be the amendment to the *hukou* inheritance rule in 1998, which changed *hukou* inheritance from passing from mothers to children to passing from either mothers or fathers to children. Xing and Nie (2010) and Han et al. (2015) show that this triggered an increase in intermarriage rates between rural women and urban men, but a much less pronounced increase in intermarriage between rural men and urban women. Other research reveals the gendered nature of *hukou* intermarriage. Lui's (2016) qualitative study shows that urban masculinity is preferred by both urban and rural women, and rural femininity is desirable to rural origin men and acceptable to urban men whereas urban femininity and rural masculinity are only preferred by the opposite sex with the same hukou. Thus, relationships in which the man is urban and the woman is rural may be more accepted than those in which the woman is urban and the man is rural. Another thread of research examines status exchange in hukou intermarriage, finding that men and women tend to utilize their education as leverage to marry up in hukou (Lui, 2017a; Qian & Qian, 2017).

Although recent research touches upon trends in *hukou* intermarriage, past analyses have been restricted to marriages occurring around and after the economic reforms of 1979 (e.g., Han et al., 2015; Lui, 2017a; Xing & Nie, 2010). Furthermore, little attention has been paid to the macro social, economic, and demographic mechanisms generating trends in intermarriage, such as the rise in income inequality (but see Xing & Nie, 2010). Additionally, previous studies of *hukou* intermarriage have focused on either the *hukou* destination of couples, i.e., their current status (Han et al., 2015; Xing & Nie, 2010), or their *hukou* status at the time of marriage (Lui, 2017a; Qian & Qian, 2017), ignoring the potentially important impact of *hukou* conversion from rural to urban status. The focus on *hukou* destinations may significantly understate the extent of social contact between urban and rural *hukou* holders based on their social origins. *Hukou* conversion is often used as an indicator of upward status mobility in China (e.g., Zhang & Treiman, 2013; Zheng & Wu, 2013) but we have limited knowledge about how administrative changes in *hukou* conversion have affected *hukou* intermarriage.

This study addresses these issues by estimating trends in *hukou* intermarriage by origin *hukou* status over a period of five decades, examining marriages formed between 1958 and 2008, thus beginning the time series two decades earlier than previous research. Because *hukou* status represents state-sponsored institutionalized inequality, trends in *hukou* intermarriage convey important information about social mobility via marriage in China. In

addition, we test several hypotheses about change and variation in intermarriage. Typical explanations for trends in intermarriage include rising educational attainment, increased inequality, and changes in availability (Schwartz, 2013). We show that *hukou* intermarriage in China has increased markedly since the mid-1980s—not just around the 1998 change in *hukou* inheritance laws—and that the usual explanations for trends and variation cannot explain this.

A common hypothesis for trends in intermarriage is that increased inequality should reduce intermarriage by making it more costly for individuals to "marry down" (e.g., Fernández, Guner, & Knowles, 2005). However, we find evidence of the opposite in China—increased inequality is associated with *increased hukou* intermarriage, a finding which is consistent with the idea that increased *incentives* for intermarriage with growing inequality in China may dominate any increased cost effect. Our evidence is also consistent with the hypothesis that incentives vary by gender; rural women are much more likely to marry urban men in times of high inequality than rural men are to marry urban women.

Additionally, we show that the increased educational attainment and availability of rural partners in urban areas have had trivial impacts on *hukou* intermarriage, but rural-to-urban *hukou* conversion plays a key role in explaining rising intermarriage. These findings suggest that standard hypotheses about assortative mating may not be applicable in this context.

# 2. Social change and hukou intermarriage

China has undergone major social changes over the past five decades, some of which point to potential increases in hukou intermarriage and others that point to decreases. In 1978, the state initiated an educational reform that increased average schooling in both urban and rural areas (Deng & Treiman, 1997). It is possible that rising educational attainment may result in increased hukou intermarriage. Whereas urban hukou holders still attain substantially more education than rural hukou holders, both groups have seen large monotonic increases in average years of schooling (author's calculations from 2003 and 2006 Chinese General Social Survey). The assimilation literature suggests that education promotes the formation of universalistic values and weakens own group attachment (Demo & Hughes, 1990; Gullickson, 2006; Kalmijn, 1998). The highly educated tend to hold more open attitudes towards interracial relationships (Herman & Campbell, 2012), which may increase boundary crossing. Moreover, individuals from less advantaged groups are more likely to achieve upward socioeconomic mobility with increased education, which could create new opportunities for social contact with advantaged groups (Kalmijn, 1998; Qian & Lichter, 2007). Empirical studies using data from the United States have found that highly educated Asian and Hispanic Americans are more likely to intermarry across ethnic boundaries (Liang & Ito, 1999; Qian, 1997; Qian & Cobas, 2004; Qian & Lichter, 2007;). Likewise, studies of *hukou* intermarriage show that education increases the likelihood of marrying up in hukou for those with low hukou status (such as those with rural hukou) (Lui, 2017a) and those without local *hukou* status (Qian & Qian, 2017). By this logic, we would expect increased educational attainment in China to be associated with increased hukou intermarriage over time.

Another significant change beginning in the 1980s was the sharp rise in economic inequality. The Gini coefficient of family income increased monotonically and dramatically from 0.31 in 1981 to 0.55 in 2012 (Ravallion & Chen, 2007; Xie & Zhou, 2014), an increase primarily driven by growing urban-rural inequality (Sicular et al., 2007; Xie & Zhou, 2014). The dominant hypothesis in the assortative mating literature is that inequality should depress intermarriage because it raises the economic costs of "marrying down" (Fernández et al., 2005; Monaghan, 2015; Schwartz, 2013; Torche, 2010). Thus, as the economic and social distance between groups widens in times of high inequality, *hukou* intermarriage may become less common. Given the large increase in urban-rural inequality in China from 1990 to 2008, we thus expect intermarriage to have declined.

Additionally, since the mid-1980s the massive migration of workers and families from rural to urban areas has reshaped the composition of urban marriage markets. Before the mid-1980s, the state stringently controlled rural to urban mobility. Uncontrolled migration was thought to increase the economic and social pressure in urban areas and undermine socialist industrialization (Chan, 1994, pp. 76-78; 2009; Whyte, 2010, pp.7-13; Wu & Treiman, 2004). To control migration flows, the hukou system made individual-initiated migration extremely costly. In the period between 1958 and the mid-1980s, individuals were required to reside where they were hukou registered (Wu & Treiman, 2004). After the mid-1980s, rural to urban migration restrictions were relaxed as a result of the transition to a market economy and agricultural reform. Scholars have described the period since the late 1980s as the "age of migration" (Liang, 2001). By the end of the 1980s, there were around 20 to 30 million rural migrants in cities (Chan, 2012a; Liang, 2001). This is vastly larger than the absolute size of the Mexican immigrant population in the U.S. (Gibson & Lennon, 1999). In 2011, there were about 160 million rural migrants in urban China (Chan, 2012a), which is about 13 times the Mexican-born population in the U.S. in the same year (Passel, Cohn, & Gonzalez-Barrera, 2012).

The unprecedented influx of rural migrants to urban areas may have dramatically changed the dynamics of the urban marriage market. Recent research suggests that the greater availability of potential in-group mates may decrease intermarriage through increased opportunities for endogamy and increased group cohesion. In the U.S., Qian and Lichter (2007) attribute the slowdown in the long-term increase in intermarriage in the 1990s to the increased availability of Latinos and Asians. Thus, mass rural-to-urban migration in China may expand the pool of marriageable rural migrants in urban areas, thereby increasing opportunities for intra-group contact and intra-*hukou* marriage.

Moreover, pioneer migrants were primarily young males in the early years of rural-to-urban migration, leading to a restricted marriage market for rural men seeking rural wives in urban areas. The sex imbalance has changed rapidly as an increasing number of female rural migrants moved into manufacturing in urban areas after 1990. Chinese census microdata shows that the sex ratio of rural migrants in urban areas declined from 151 in 1990 to 100 in 2000 (author's calculations from 1 percent China 1990 census sample and 0.95 per thousand China 2000 census sample). Thus, increased migration among rural women has expanded the pool of rural women in urban areas, which may particularly benefit urban men in regions with severe shortages of urban women. The influx of female migrants may expand

opportunities for endogamous marriage among rural men and may also increase the rate of intermarriage between urban men and rural women. It is not clear, however, which force—either endogamy or intermarriage—would dominate given the changing sex ratio for both rural migrants and urban residents.<sup>1</sup>

# 3. Hukou conversion

An important and unique complication of analyses of *hukou* intermarriage is *hukou* conversion. *Hukou* converters, that is, those who were born as rural *hukou* holders and changed their status to urban at some point in their lives, have thus far been largely ignored by prior *hukou* intermarriage literature (but see Xiang, 2015). Conversion from rural to urban *hukou* is very difficult (Wu & Treiman, 2004; Wu & Treiman, 2007). In Mao's era, the state prioritized urban industrialization, treating the rural sector as an engine of urban development and strictly controlling migration (Chan & Zhang, 1999; Whyte, 2010). Downward *hukou* conversion (e.g., from urban to rural) and conversions between similar levels (e.g., from one village to another village) were allowed. Upward conversion was strictly regulated (e.g., from small cities to big cities, from villages to urban cities, from any other city to Beijing or Shanghai) (Ministry of Public Security, 1964). Under this policy, opportunities were limited for rural residents to convert their *hukou* status from rural to urban except for those who were hired by an urban state-owned enterprise or accepted at an urban school.

Between 1977 and the mid-1990s, *hukou* conversion rules tended to reinforce the urbanrural hierarchy by defining urban *hukou* as a type of reward for elite rural *hukou* holders, while opening opportunities for rural residents to pursue upward *hukou* mobility. According to 1977 regulations, the best and brightest rural residents (e.g., those accepted into an urban college, promoted to a cadre position at the township level, or hired by a state-owned enterprise in an urban area) had greater access to *hukou* conversion (Chan & Zhang, 1999; Ministry of Public Security, 1977; Xiang, 2015). Empirical research confirms that individuals who possessed educational, social, or political capital had a higher probability of converting via formal or informal channels since the establishment of *hukou* system (Deng & Gustafsson, 2014; Wu & Treiman, 2004; Wu & Treiman, 2007; Zhang & Treiman, 2013; Zheng & Wu, 2013). These converters have been labeled "individual converters" or "selected converters" to indicate the importance of individual achievement as the mechanism of *hukou* conversion (Zhang & Treiman, 2013; Zheng & Wu, 2013).

During the same period between 1977 and the mid-1990s, conversion was more difficult for the rural spouses, children, and parents of converters and urban *hukou* holders than individual converters. This is because dependents were mostly considered as tied movers rather than contributors and thus were required to apply for conversion through a more competitive channel—conversion for personal reasons. Draconian rules and small quotas resulted in a small probability of success for this group. For instance, only rural spouses of urban *hukou* holders with chronic diseases who could not care for themselves and did not

<sup>&</sup>lt;sup>1</sup>China's one-child policy also affects the sex ratio. However, demographic studies estimate that its effects on marriage markets were not apparent before 2000 (Goodkind & Branch, 2006; Tuljapurkar et al., 1995), is an unlikely explanation for observed trends.

Res Soc Stratif Mobil. Author manuscript; available in PMC 2019 August 01.

have rural relatives to rely on were eligible to apply for *hukou* conversion (Chan & Zhang, 1999; Ministry of Public Security, 1977). Meanwhile, relatives needed to compete for conversion under a strict quota which was equivalent to 0.15 to 0.2 percent of the urban *hukou* population of the destination urban city (Chan & Zhang, 1999). Thus, marrying an urban *hukou* holder in no way guaranteed *hukou* conversion for the rural spouse (Chan & Zhang, 1999; Deng & Gustafsson, 2014; Zhang & Treiman, 2013). Living apart was a very common status for *hukou* intermarried couples in this period. About 5 million workers in state-owned enterprises were estimated to live apart from their spouses in China in 1980; 70% of these workers' spouses lived in rural communities (Yang, 1994, pp.149).

Between 1980 and the mid-1990s, the state eased regulations to facilitate *hukou* conversion for dependents who suffered from long-term separation, mostly spouses and children of urban *hukou* holders (e.g., General Office of State Council, 1985; State Council, 1984; State Council, 1992). The spouses and children of urban cadres, professionals, and some types of state workers were given priority for conversion. These converters have been called "family-related converters" or "family-tie converters" because the mechanism of their conversion was their relationship to an urban spouse, urban parents, or urban children (Xiang, 2015).

Between 1992 and 2008, the numbers of hukou converters increased steadily. A major reason for this was the expansion of higher education in the late 1990s, which offered a viable pathway to hukou conversion to increasing numbers of rural residents. Between 1990 and 2000 the proportion of hukou converters who converted because they were enrolled in school in urban areas more than doubled (Sun & Fan, 2011). Other pathways to conversion not associated with individual achievement have also become more common since the 1990s. One example of this is land acquisition, a process whereby land that was once farmland was reclassified as urban because of population growth or urban planning (Chan, 2012b; Zhang & Treiman, 2013; Zheng & Wu, 2013). These converters are known as "collective converters" because their conversion was due to reclassification of rural areas or involuntary resettlement to an urban area (Zhang & Treiman, 2013; Zheng & Wu, 2013). However, this pathway was a much less common reason for urban conversion than enrollment in higher education (Sun & Fan, 2011), and those who converted were a much less educationally and occupationally select group than individual converters (Zhang & Treiman, 2013; Zheng & Wu, 2013). The result of these trends overall is that converters have become an increasingly advantaged group based on individual achievement.

Additionally, conversion due to family ties has also further relaxed since the late 1990s. *Hukou* inheritance rules were revised in 1998 from being based on only mother's *hukou* to inheritance from either the father or mother, potentially resulting in a lower demand for *hukou* conversion among children. *Hukou* conversion for other family reasons (for both rural spouses and parents) also increased particularly in small and middle-sized cities, because of more friendly conversion policies (Chan & Zhang, 1999; State Council, 1998). Thus, part of the rise of *hukou* origin intermarriage may be because the number of rural-to-urban *hukou* converters with socioeconomic characteristics that are attractive to urban origin *hukou* holders has grown. Moreover, the relaxation of family-related *hukou* conversion may promote more intermarriage between urban *hukou* holders and rural *hukou* holders because

individuals may feel more assured that they and their family members may be able to obtain urban *hukou* after marriage to an urban partner.

To quantify the effects of changes in conversion on *hukou* origin intermarriage we decompose trends into parts due to converters and non-converters and by the conversion type (individual, family-related, and collective conversion). We show that although the usual hypotheses used to explain change and variation in intermarriage do not explain the rise in intermarriage in China, *hukou* conversion plays a key role.

### 4. Data, measures, and methods

#### 4.1. Data

We use pooled data from 2003, 2006, and 2008 Chinese General Social Survey (CGSS) to examine trends in *hukou* intermarriage for those married from 1958 to 2008.<sup>2</sup> CGSS 2003, 2006, and 2008 are nationally representative samples of civilian adults ages 18 and older in both rural and urban areas in mainland China (except for Tibet and Qinghai). The survey contains information about respondents' basic demographic characteristics, education and occupation histories, family characteristics, migration, economic activity, lifestyles, attitudes, and social networks (National Survey Research Center Chinese General Social Survey Project, 2009). The CGSS 2003–2008 is unique in that it allows for the study of *hukou* intermarriage and conversion. It contains detailed information about respondents' and spouses' *hukou* destination (current *hukou* status) and whether they converted their *hukou* status. The CGSS is only available in Chinese but has been increasingly used by Englishlanguage scholars (e.g., Qian & Qian, 2017; Xie & Zhou, 2014; Xu, Perkins, & Chow, 2010; Yeung & Hu, 2013; Zhang & Treiman, 2013). Chinese publications using the datasets are more extensive (see National Survey Research Center, 2015).

Our analytic sample is composed of couples in which both partners were married after age 14 and in or after 1958—the year when the *hukou* system became a national policy (Chan & Zhang, 1999; Chan, 2009). Because marriage is still nearly universal in China (Ji & Yeung, 2014), selection into marriage is unlikely to have large effects on the results. Additionally, because internal migration in China is almost all from rural to urban areas rather than the reverse, we restrict the sample to respondents living in urban areas (defined as municipalities, prefectural level cities, county-level cities, and towns). Given that the data only consistently contains information on the year of respondents' first marriage, we only include respondents in their first marriages regardless of their spouses' marriage order. Thus, the sample is composed of the stock of first married respondents living in urban China who married after age 14 between 1958 and 2008 (n = 12,085 couples).

After dropping couples with missing values on critical variables, the final analysis sample contains 11,954 couples. Although the results of analyses using samples of prevailing marriages may be subject to biases from selective marital dissolution, empirical studies have shown that marriage dissolution does not have large effects on patterns of homo-gamy even

 $<sup>^{2}</sup>$ The CGSS was also administered in 2010 to 2013, but these data do not contain the information necessary for identifying *hukou* converters and thus is not used here.

Res Soc Stratif Mobil. Author manuscript; available in PMC 2019 August 01.

in contexts where divorce is prevalent (Schwartz & Mare, 2012). In China, divorce is less common than in other countries—the crude divorce rate was 1.7 per 1000 total population in China in 2008 versus 3.5 per 1000 total population in the U.S (Centers for Diseases Control & Prevention/National Center for Health Statistics National Vital Statistics System, 2015; United Nations Statistical Division (UNSD) (2011)); thus, we do not anticipate that selective marital dissolution will significantly bias our results. Moreover, because we use survey data from 2003 to 2008 to characterize trends in marriages formed in 1958–2008, it is possible that our results are affected by survival bias particularly for older cohorts. Life tables for China indicate that survival rates are high prior to age 50 (World Health Organization, 2018). Therefore, we replicated our analyses for cohorts who were younger than 50 at the time of survey, thereby restricting our sample to cohorts married between 1971 and 2008. Given that our results do not rest on the period before 1971, our conclusions using this restricted sample are quite consistent with those discussed below.

#### 4.2. Measures

**4.2.1. Hukou intermarriage**—Given that *hukou* intermarriage is a form of mobility from one's social origins, we begin by describing intermarriage by *hukou* origin and then identify the portion of observed trends in *hukou* destination intermarriage due to *hukou* conversion and the portion not due to conversion. The CGSS does not contain a straightforward *hukou* origin question, and we therefore identify *hukou* converters using several variables that differ from year to year in the CGSS as defined in Table A1.

**4.2.2. Marriage cohort**—Nine marriage cohorts are constructed using the year of first marriage (1958–1964–1965–1969,..., 1995–1999–2000–2008).

**4.2.3. Education**—Education is categorized as the highest education husbands and wives achieved as of the survey date: primary school or less (illiterate, recognize some words, private primary school and regular primary school), junior high, senior high (specialized/ vocational senior high and regular senior high), and college or more (part-time/full-time junior college, part-time/full-time college, and graduate school or more).

**4.2.4. Urban-rural income inequality**—Differences in the economic potential of urban and rural *hukou* holders may powerfully affect the likelihood of intermarriage. To measure the growing income divide, we use the China Health and Nutrition Survey (CHNS) from 1989, 1991, 1993, 1997, 2000, 2004, 2006 and 2009 in urban areas to estimate the median log annual income for prime working age (21–64 year olds) adults by *hukou* and sex from 1990 to 2008.<sup>3</sup> Following Mare and Schwartz (2006) and Torche (2010), we then link median incomes to men and women in the year of their first marriage. Given that urban *hukou* holders (Deng & Gustafsson, 2014), we assign the median log annual income for urban *hukou* holders to converters given that median log annual income is not available for converters in the CHNS. The absolute difference in the median log annual income for

 $<sup>^{3}</sup>$ For years that data are not available, we linearly interpolate income. Measures from the CHNS are very similar to those for urban and rural residents reported by National Bureau of Statistics in China.

Res Soc Stratif Mobil. Author manuscript; available in PMC 2019 August 01.

husbands and median log annual income for wives for couples who intermarry across *hukou* boundaries measures urban-rural income inequality. This measure includes gender differences in economic status. The gender earnings gap is relatively low in China compared to Western societies but has increased over time (Gustafsson & Li, 2000), a trend that may affect women's bargaining position in the marriage market.

All monetary measures were adjusted to constant 2008 RMB using the CPI for 1989–2008 (National Bureau of Statistics of China (NBS), 2014b). CHNS defines an individual's income as the sum of all sources of income and revenue (business, farming, fishing, gardening, livestock, non-retirement wages, and retirement income) minus expenditures for individuals. This individual income measure ignores the increasing state subsidies such as public housing, medical, and educational subsidies enjoyed by urban *hukou* holders, which may underestimate the true amount of urban-rural income inequality (Li & Luo, 2010).

**4.2.5. GDP per capita**—We also include GDP per capita to control for changes in the level of economic development in China. Smits, Ultee, and Lammers, 1998) proposed an "inverted U" hypothesis predicting that in the early stages of economic development, men and women may be more likely to match on education or other achieved attributes, which are strongly associated with *hukou* status. Studies of educational assortative mating in China lend support to the idea that human capital is increasingly important in the early stages of economic development. In tandem with growing economic development, educational homogamy rose sharply after the late 1970 s (Wang & Wong, 2017). Correspondingly, the inverted U hypothesis predicts an increase in *hukou* endogamy (decrease in intermarriage). Thus, any rise in intermarriage that we observe could be dampened by increased economic development. We include GDP in our models to test the robustness of the inequality results to the economic development explanation (also see Fernández et al., 2005).

**4.2.6. Availability of rural-to-urban migrants**—We use the 1 percent sample of China's 1990 census and 0.95 per thousand sample of China's 2000 census to measure the availability of rural-to-urban migrants by marriage cohort and province. Though the definition of migrants varies somewhat across census years<sup>4</sup> and has been criticized for undercounting migrants (Anderson, 2004; Duan & Sun, 2006) there are no other surveys that count migrants nationally by year and province before 2008. We therefore match the census availability measures to couples in the CGSS by the province in which they reside and their marriage cohort. For the intercensal years, we linearly interpolate the availability of rural migrants between years.

It should also be noted that the migration statistics correspond to marriage market conditions in the year that respondents were first married but in the province that they currently reside given the lack of information on couples' residence at the time of marriage. If intermarried couples are more likely to migrate from high availability provinces to low availability provinces after marriage, then we would underestimate the association between availability

<sup>&</sup>lt;sup>4</sup>In the 1990 census, migrants are defined as people who reside locally for more than one year holding a *hukou* status from another county or city, or people who have left their *hukou* registration area for more than one year. The 2000 census defines migrants as people who have resided locally for at least six months holding a *hukou* status from other towns in the same county or from other county or city (intra-county or inter-county migration for at least six month). For a detailed comparison see Duan and Sun (2006).

Res Soc Stratif Mobil. Author manuscript; available in PMC 2019 August 01.

and intermarriage. To address this concern, we performed sensitivity analyses using newlywed couples, whom we would expect to be more likely to be currently residing in the province in which they were married than those who were married in the more distant past. Given that availability measures are only available for the 1990–1994 and 1995–1999 marriage cohorts, we define newlywed loosely (defined as those married within four years of the survey and another sample of those married within eight years of the survey) to maximize sample size across marriage cohorts. Results for these samples are consistent with those for prevailing marriages presented below, suggesting that our results are robust to the migration of couples from their place of marriage.

The availability of rural migrants would ideally measure the number of rural men and women who are at risk of marriage in urban areas. Rural migrants are defined for the purposes of the availability measures as unmarried rural *hukou* holders between the ages of 15 and 39 who resided in an urban location at the time of census, and who have resided without a local *hukou* or left their *hukou* residence for at least 6 months (census 2000) or 12 months (census 1990). Inconsistency in the length of migration is a potential issue leading to undercounting for rural-to-urban migrants, particularly for short-term migrants in the 1990s.

Because it is an open question exactly how availability might affect intermarriage, we construct two measures of availability: (a) the relative size of the rural migrants, that is, the percentage of the total population in a given province and marriage cohort that is rural-tourban migrants and (b) the absolute size of the rural migrant population by province and marriage cohort. Relative size measures the probability of meeting a potential spouse from the same *hukou*. Absolute size may also affect how easy it is to find a potential mate.

It is possible that measuring availability at the provincial level may not accurately reffect marriage market conditions by *hukou* status. There is evidence that marriage markets operate at a more local level in China (Liang & Yang, 2014; Qiu & Ding, 1991). Empirical studies have also found that migrants and local residents are spatially segregated within cities (Huang & Yi, 2009). Rural migrants are more likely to reside in temporary housing, such as dormitories and shelters at the work site (Chen et al., 2011; National Bureau of Statistics of China (NBS), 2010; National Bureau of Statistics of China (NBS), 2013; National Bureau of Statistics of China (NBS), 2014a; Wang & Zuo, 1999). It would be preferable to test the sensitivity of the results to smaller geographic units. However, the provincial level is the smallest geographic unit for which nationally representative data are available to our knowledge.

**4.2.7. Sex-ratio**—We use provincial level sex ratios among rural migrants in urban areas (including city and town defined by the NBS) to control for compositional changes in the marriage market from changes in migration, births, and deaths. The sex ratio is computed as the number of males relative to 100 females between age 15 and 39 by province and year from 1990 to 2000, based on the 1 percent sample of China's 1990 census and the 0.95 per thousand sample of China's 2000 census. Like the availability statistics, we linearly interpolate missing years and obtain average sex ratio for the 1990–1994 and 1995–1999 marriage cohorts by province.

**4.2.8. Conversion channels and urban-converter intermarriage**—Because the 2006 and 2008 CGSS data does not identify the reasons for *hukou* conversion, we instead rely on the 2003 Chinese General Social Survey data to describe these mechanisms. This sample is composed of 4532 couples in which the respondents are in their first marriage living in urban China and married after age 14 between 1958 and 2003.

We categorize converters into three groups: (1) individual converters, (2) family-related converters, and (3) collective converters. Individual converters are those who were able to convert because of enrollment in higher education, enlistment in the People's Liberation Army, sponsorship by a state-owned enterprise, promotion to a managerial position in the Communist Party, other work-related conversion, or economic investment-related conversion<sup>5</sup>. Family-related converters are those who converted because of their relationship to an urban *hukou* holder (as a spouse, child, or parent of an urban *hukou* holder). Unfortunately, we are unable to differentiate between those who convert because they married an urban spouse or because they were the parent or child of an urban *hukou* holder, but past research has indicated that the majority of these conversions are via a spouse (Zhao, 2012). Collective converters are those who convert because their location of residence was changed from rural to urban or because of involuntary resettlement to urban areas.

#### 4.3. Methods

Rather than using log-linear models, which are commonly used for modeling intermarriage patterns (Qian & Lichter, 2007), we utilize logistic regression models to examine the probability of intermarriage. This is because two methods generate similar results for trends in intermarriage (results for log-linear models available upon request) and logistic regression models allow for the straightforward addition of explanatory variables. The baseline model takes the following form:

$$\log\left(\frac{p_i}{1-p_i}\right) = \beta + \sum_t \beta_t^T Marriage Cohort_t \quad (1)$$

where  $p_i$  is the probability that couple *i* is intermarried by *hukou* origin status, *t* is marriage cohort (t = 1958-1964-1965-1969..., 1995-1999-2000-2008), and the  $\beta$ s are the parameters to be estimated.

Next, we test the hypotheses outlined above by sequentially adding measures of (1) educational attainment, (2) urban-rural inequality and GDP, and (3) the size of the rural-tourban migrant population and the sex ratio to the baseline model. Because measures of the urban-rural inequality and the growth of GDP are only available from the CHNS for the last three marriage cohorts (1990–1994–1995–1999, and 2000–2008), we constrain this part of the analysis to couples who married in or after 1990 (4790 couples). For the availability analysis, we further constrain the sample to 3156 couples married between 1990 and 1999

<sup>&</sup>lt;sup>5</sup>In the 1990s, the decentralization of the *hukou* management system allowed some local governments to "sell" urban *hukou* status to increase government revenue. For example, those with rural *hukou* were eligible to apply for local urban *hukou* if they purchase or build a home in certain cities.

Res Soc Stratif Mobil. Author manuscript; available in PMC 2019 August 01.

given that the China census microdata on the availability of migrants is only available for 1990 and 2000.

Next, we decompose the extent to which trends in *hukou* origin intermarriage stem from (a) marriages between rural origin *hukou* holders who later converted to urban *hukou* status and urban origin *hukou* members and (b) marriages between rural origin *hukou* holders who remained rural *hukou* holders and urban origin *hukou* members. This decomposition shows the extent to which the rise in urban-rural origin intermarriage can be accounted for by increasing rates of *hukou* conversion. We use a multinomial logit model to obtain trends in intermarriage between urban *hukou* holders, non-converter rural *hukou* holders, and rural-to-urban *hukou* converters. The model takes the following form:

$$\log\left(\frac{p_{ij}}{p_{i0}}\right) = \beta + \sum_{t} \beta_{t}^{T} Marriage Cohort_{t} \quad (2)$$

where  $p_{ij}$  is the probability that couple *i* is intermarried by couple type (*j* =0: *hukou* origin homogamous marriages, 1: urban-rural intermarriage, 2: urban-converter intermarriage).

Finally, we examine the relative contribution of three *hukou* conversion pathways to the trend in urban-converter intermarriage. We use a multinomial logit model that takes the same form as Eq. (2), but where *j* is expanded to incorporate the pathway of conversion (*j*=0: *hukou* origin homogamous marriages, 1: urban-rural intermarriage, 2: urban-individual converter intermarriage, 3: urban-family-related converter intermarriage, 4: urban-collective converter intermarriage).

### 5. Results

#### 5.1. Trends in hukou origin intermarriage

Table 1 presents logistic regression models predicting *hukou* origin intermarriage for couples in their first marriages. Model 1 is the baseline model (Eq. (1)), in which intermarriage varies only by marriage cohort. Table 1 shows the odds ratios from this model and the associated predicted probabilities are shown in Fig. 1. As estimated by the baseline model, Fig. 1 shows low and fluctuating rates of intermarriage between 1958–1964 and 1985–1989. The jump in intermarriage between 1965–1969 corresponds to increased urban-rural interaction as a result of the Sent-Down movement in which urban youth migrated to rural areas (Croll, 1981; Song & Luke, 2014; Song, 2009). After 1985–1989, *hukou* intermarriage increased rapidly. Intermarriage rates based on *hukou* origin increased from 20% in 1985– 1989 to about 30% in 2000–2008. This rise in intermarriage occurred during a time of increasing educational attainment, increased internal migration, and increased urban-rural inequality.

Could part of the rise in intermarriage be due to increases in educational attainment? To test this, Model 2 shown in Table 1 adds husbands' and wives' education to the baseline model, which controls for compositional shifts in husbands' and wives' education across cohorts. Consistent with the hypothesis that intermarriage is more likely among the highly educated

(Liang & Ito, 1999; Qian & Cobas, 2004; Qian & Lichter, 2007; Qian, 1997), the coefficients show that husbands with college degrees are somewhat more likely to intermarry than those with primary school or less education. By contrast, however, highly educated wives are slightly less likely than those with less education to intermarry, unlike in the U.S. where highly educated wives are more likely than those with less education to intermarry (Liang & Ito, 1999; Qian & Lichter, 2007; Qian, 1997). This is consistent with the gendered nature of marriage in China in which men's education is an asset on the marriage market but women's education is not (Ji & Yeung, 2014; Qian & Qian, 2014). However, neither the relationship between husbands' nor wives' education and *hukou* intermarriage is statistically significant and the addition of these variables leaves the marriage cohort odds ratios virtually unchanged. Correspondingly, Fig. 1 shows that the predicted probabilities of intermarriage based on Model 2 almost entirely overlap with those based on Model 1, suggesting that increasing educational attainment does not explain the rise of *hukou* intermarriage in China.

Next, two economic measures are added to Model 3: urban-rural income inequality and GDP per capita. Because information on the urban-rural economic inequality is available after 1990 from the CHNS, Model 3 includes information on couples married between 1990 and 2008. Contrary to the expectation that increasing inequality decreases *hukou* intermarriage, the urban-rural income gap is *positively* associated with the intermarriage in China. Table 1 shows that a 1% increase in the urban-rural income gap is associated with an increase the odds of *hukou* intermarriage of 2.1% ( $1.01^{\ln(8.04)} = 1.021$ ). Moreover, this association does not appear to be due to increased economic development. Urban-rural inequality is still positively associated with intermarriage when GDP is controlled. GDP per capita is negatively associated with intermarriage, which is consistent with the expectation that increasing economic development is associated with lower intermarriage rates (Smits et al., 1998). As expected given the significance of the inequality coefficient, Fig. 1 shows that Model 3 explains some of the increase in *hukou* intermarriage since 1990. This is due to the inclusion of the inequality coefficient as the inclusion of GDP per capita does not explain the increasing trend.

Model 4 includes information on couples married between 1990 and 1999. Table 1 shows that couples living in provinces where a larger proportion of the population are migrants are less likely to be intermarried. Specifically, a one percentage point increase in the relative size rural-to-urban migrants is associated with a 1% decrease in the odds of *hukou* intermarriage net of the sex ratio and other variables (1-0.99 = 0.01), which is consistent with the hypothesis that greater availability of rural migrants increases *hukou* endogamy. The absolute size of the rural-to-urban migrants is not significant but is positively associated with intermarriage. The two availability measures offset one another and together have very weak explanatory power. The availability results are consistent when the sex ratio is not included as a control variable (not shown). Fig. 1 shows that the inclusion of the availability measures do not explain trends in *hukou* intermarriage. Though unexpected, this result is consistent with previous findings. Han et al. (2015) argue that the availability of migrants is not a likely explanation for the upsurge in intermarriage after 1998 given that migration increased steadily over this period.

#### 5.2. Why might higher inequality be associated with increased hukou intermarriage?

Why would higher inequality be positively associated with intermarriage in China unlike other countries? One possible explanation is strong gendered incentives for intermarriage. China retains many traditional features such as the expectation that women marry up in social status and the persistence of gendered expectations of women's domesticity and men's economic ability (Attané, 2012; Ji, 2015; Qian & Qian, 2014; Song & Luke, 2014). Despite a smaller gender gap in earnings than in many countries (Gustafsson & Li, 2000), women's labor force participation rate has worsened in China since the 1990s, which may have increased the incentive to find a partner that will guarantee their socioeconomic status (Mu & Xie, 2014). More generally, the importance of men's economic status for marriage may be heightened in the context of growing inequality given the expectation that men bear primary financial responsibility for their families. Thus, the imperative that men "marry down " and women's incentive to "marry up" (Lui, 2016) may outweigh the greater "costs" that men bear of marrying down in times of high inequality. Past research from China is consistent with this hypothesis. Women express stronger preferences for men who are more economically established (evaluated by home ownership) as housing prices rise (Deng, Qin, & Zhu, 2016). By contrast, disincentives for "marrying down" might be particularly weak for men who confront a thin marriage market in urban China and financial competition for brides in the context of high inequality.

To test whether the evidence is consistent with the hypothesis that gendered incentives to intermarry outweigh the costs when inequality is high, we estimate the odds of *hukou* origin intermarriage separately for (a) rural wives and urban husbands and (b) rural husbands and urban wives. To do this, we use a multinomial logistic regression model with *hukou* homogamy (rural husband marries rural wife, and urban husband marries urban wife) as the reference group. The independent variables are those included in Model 3. If the incentives outweigh the costs, we would expect higher rates of intermarriage in times of high inequality. However, because marriage in China is gendered and men are expected to "marry down" in status, rising inequality should increase the likelihood that rural women marry urban men, but not the likelihood that rural men marry urban women.

Table 2 shows that the relationship between urban-rural inequality and the likelihood of intermarriage does indeed vary by gender. The urban-rural income gap is positively associated with the likelihood that a rural wife is married to an urban husband, and negatively associated with the likelihood that a rural husband is married to an urban wife controlling for the other variables. Table 2 shows that a 1% increase in the urban-rural income gap is associated with 2.7% increase  $(1.01^{\ln(14.07)} = 1.027)$  in the odds that a rural wife is married to an urban husband, and a 0.3% decrease  $(1.01^{\ln(0.74)} = 0.997)$  in the odds of that a rural husband is married to an urban husband, and a 0.3% decrease  $(1.01^{\ln(0.74)} = 0.997)$  in the odds of that a rural husband is married to an urban wife. Only the income gap coefficient for urban husband-rural wife intermarriage is statistically significant. In addition, GDP per capita is negatively and significantly related to intermarriage between rural husbands and urban wives, suggesting that as overall economic development increases, the likelihood of intermarriage between rural men and urban women declines, which is consistent with the results in Table 1 and Smits et al.'s (1998) "inverted U" hypothesis regarding the early stages of economic development.

Fig. 2 shows the probability of the two types of intermarriage by the level of urban-rural income gap controlling for other variables. As the gap increases from 0 to 0.5, the probability of marrying an urban husband for rural wives increases rapidly from 0.08 to 0.24. By contrast, the probability for rural men decreases slowly from 0.10 to 0.07. These findings are consistent with the hypothesis that in times of growing inequality, rural women are more likely to marry urban men. Rural men are somewhat less likely to marry urban women in times of high inequality, but this association is not statistically significant.

#### 5.3. The effect of hukou conversion on trends in hukou intermarriage

One factor not yet explored is the extent to which increases in *hukou* origin intermarriage are the result of *hukou* conversion trends in China. Based on Eq. (2), Fig. 3 shows trends in the probability of intermarriage for different marriage types. It shows that intermarriage between current urban and rural *hukou* holders (urban-rural intermarriage) and intermarriage between urban *hukou* origin holders and those who were born with a rural *hukou* but have converted to urban *hukou* (urban-converter intermarriage) have increased since 1985–1989, which is consistent with the rising overall *hukou* origin intermarriage trend.

Table 3 shows a decomposition of intermarriage probabilities by marriage type. The last row shows that from 1985–1989 to 2000–2008, the rise of urban-rural intermarriage explains 58% of the increase of *hukou* origin intermarriage. However, in the first period from 1985–1989 to 1990–1994, 77% of the increase is due to the rise in urban-converter intermarriage. In the second period from 1990–1994 to 1995–1999, urban-converter intermarriage also explains almost all of the increase (87%). By contrast, in the third period from 1995–1999 to 2000–2008 the rise of urban-rural intermarriage explains all of the observed increase. Thus, the increase in *hukou* origin intermarriage after 1985 is primarily explained by intermarriage between urban *hukou* holders and those who were born as rural *hukou* holders but then converted to an urban *hukou*. Only in the most recent period do we see a sharp rise in intermarriage between current urban and rural *hukou* holders, consistent with Han et al.'s (2015) findings on the importance of changing inheritance laws in 1998.

Fig. 4 uses data from the 2003 CGSS to show trends in *hukou* intermarriage by converter type. Trends from the 2003 CGSS data in overall rates of urban-converter intermarriage are similar to those shown in Fig. 3 using 2003, 2006, and 2008 CGSS data (for which converter type information is not available). Fig. 4 shows that the most common type of urban-converter intermarriage is between urban *hukou* holders and those who have converted through individual achievement. Urban-family-related converter intermarriages are the next most common, followed by urban-collective converter intermarriages. These results are consistent with the selectivity of these different converter types with individual converters being the most socioeconomically advantaged and thus potentially the most attractive to urban origin *hukou* holders and collective converters being the least selective group.

A decomposition exercise similar to that presented in Table 3 shows that the rise of urbanfamily-related converter intermarriage explain 57% of the increase of urban-converter intermarriage from 1985 to 1989 to 2000–2003 and increased urban-individual converter intermarriage explains 34% of the increase. Urban-collective converter intermarriage only explains 10% of the increase. The importance of increases in family-related converters

illustrates the role of the relaxation of state restrictions on conversion for family members to rising *hukou* origin intermarriage. Whereas it was once common for rural spouses of those with urban *hukou* to retain their rural *hukou*, it is now increasingly common for spouses and other family members to be successful in their efforts to convert (Zhao, 2012).

These findings extend our understanding of *hukou* in the marriage market, highlighting the importance of *hukou* conversion. If there is a *hukou* hierarchy in marriage, our finding that urban-converter intermarriages are more common than rural-urban intermarriages but less common than urban-urban marriages suggest converters occupy a middle position between urban and rural *hukou* holders. The intermediate role of the converters is achieved through two pathways. One is achieved—a mechanism through which highly successful urban converters may be picked and preferred by urban *hukou* holders. The other is regulated by policy—*hukou* conversion policy has relaxed opening opportunities for *hukou* upward mobility for spouses and family members.

## 6. Discussion

Recent research has assumed that *hukou* intermarriage in China is rare (Lu, 2003; Zhang et al., 2014). By contrast, we show that *hukou* intermarriage by origin status is surprisingly common: 20% of marriages formed between 1958–1964 were *hukou* origin intermarriages and this rose to 30% among marriages formed between 2000–2008. These intermarriage rates are far larger than the interracial marriage rate in the U.S., which was 8% in 2008 (Wang, 2012). This article has also shown that the growth of *hukou* origin intermarriage was largely concentrated after 1985 corresponding to rising urban-rural inequality in the context of the relaxation of rural-to-urban migration and economic development.

Overall, the results show that the association between men's and women's increasing educational attainment and intermarriage trends are negligible. Moreover, the increasing availability of rural migrants also does not appear to explain increases in hukou intermarriage, a finding that is robust to controls for the changing sex ratio of rural-to-urban migrants and to restricting the sample to newlyweds. Urban-rural economic inequality explains some of the increase since 1990 but we find that rapidly increasing rural-urban inequality in China is positively associated with intermarriage, which runs counter to the usual hypothesis that increased inequality reduces intermarriage (Fernández et al., 2005; Schwartz, 2013). It may be that the incentives to intermarry in times of high inequality outweigh the costs in this context. The finding that rural origin women are more likely to intermarry as inequality rises but not rural origin men support this hypothesis. Intermarriage may be an economic strategy offering women an opportunity to secure economic resources and achieve upward mobility, especially in times of high inequality. Because the gendered nature of marriage in China prescribes that men "marry down" in status, the option of intermarriage with an urban wife for rural men is less attainable (Lui, 2016). As with past research (e.g., Fernández et al., 2005; Smits et al., 1998; Torche, 2010), these findings are suggestive but should not be interpreted as causal. Future research should examine whether and how increases in economic inequality causally impact mating preferences and behaviors.

Past studies have hypothesized that rural men will face a marriage market squeeze as a result of female migration and highly skewed sex ratio at birth (Das Gupta, Ebenstein, & Sharygin, 2010; Ebenstein & Sharygin, 2009; Meng, 2009). The results presented in this paper suggest that more than these compositional changes, the economic gulf between urban and rural residents may exacerbate rural men's disadvantaged marriage market prospects by squeezing rural women out of the rural marriage market and into the urban marriage market. Rising inequality is associated with intermarriage between rural women and urban men but the urban-rural boundary is maintained and perhaps strengthened for disadvantaged rural men in times of high inequality. The numbers of unmarried rural men may grow even more rapidly in the next few decades as the gender imbalance is exacerbated as more children of the one child policy begin to marry in the 2010s (Das Gupta et al., 2010; Goodkind & Branch, 2006; Tucker & Hook, 2013).

Finally, a major contribution of this paper is the finding that increased intermarriage between urban *hukou* holders and rural-to-urban *hukou* converters accounts for a substantial portion of the increase in *hukou* origin intermarriage after 1985. Approximately 40% of the increase in *hukou* intermarriage since 1985 is the result of increases in urban-converter intermarriage. Intermarriage between urban *hukou* holders and those who have converted as a result of their achieved status are the most common urban-converter intermarriage type. These *hukou* converters are educationally and occupationally advantaged (Zhang & Treiman, 2013; Zheng & Wu, 2013), and may be more attractive on the urban marriage market than other *hukou* converters and those with rural *hukou*.

The relaxation of administrative restrictions on hukou conversion for family members (the rural spouses, parents, and children of those with urban hukou) also coincided with larger numbers of intermarriages between urban hukou holders and converters. Increases in intermarriage between those with urban hukou and those who converted via family ties account for the majority of the increase in urban-converter intermarriage since 1985. One possibility is that if administrative restrictions on family-related hukou conversion had not relaxed, many of the urban-converter intermarriages would have occurred but rural spouses would have not have been able to convert. This would have resulted in the same increase in urban-rural origin intermarriages as observed in our analysis. On the other hand, it is possible that the administrative changes have induced more urban-rural intermarriage than there would otherwise have been if this arrangement is now more attractive given the higher probability of conversion for spouses and their families. Although outside the scope of the present analysis, future research should investigate the plausibility of these alternatives. Regardless of the causal mechanisms, however, our findings suggest that the boundaries between those with rural and urban origins have weakened in China since the mid-1980s and point to conversion as a key part of this process.

In China, the state institutionalizes the urban-rural divide and exerts strong state control over the urban-rural boundary. That conventional theories about intermarriage do not apply to *hukou* intermarriage in China is not surprising. Past studies have substantiated the uniqueness of the Chinese case in other areas. For instance, Bian (1997) challenged the "strength-of-weak-ties" argument, which states that weak ties are more often used and more efficient than strong ties in provding job-related information. Instead, he found that strong

# Acknowledgments

This research was carried out using the facilities at the Center for Demography and Ecology at the University of Wisconsin-Madison (P2C HD047873). We thank Lulu Li from Renmin University for providing the CGSS data. We also thank Ted Gerber, Sida Liu, and Jim Raymo for helpful comments and suggestions on earlier drafts.

### References

- Albrecht DE, Albrecht SL. Family structure among urban, rural and farm populations: Classic sociological theory revisited. Rural Sociology. 1996; 61(3):446–463.
- Anderson BA. Undercount in China's 2000 census in comparative perspective (report No.04-565). Ann Arbor, MI: Population Studies Center at the Institute of Social Science, University of Michigan; 2004. Unpublished manuscript
- Attané I. Being a woman in China today: A demography of gender. China Perspectives. 2012; 4:5–15.
- Bian Y. Bringing strong ties back in: Indirect ties, network bridges, and job searches in China. American Sociological Review. 1997; 62(3):366–385.
- Centers for Diseases Control and Prevention/National Center for Health Statistics National Vital Statistics System. [Accessed 17 May 11] National marriage and divorce rate trends. 2015. http:// www.cdc.gov/nchs/nvss/marriage\_divorce\_tables.htm/
- Chan KW. Cities with invisible walls: Reinterpreting urbanization in Post-1949 China. Hong Kong: Oxford University Press; 1994.
- Chan KW. The Chinese *hukou* system at 50. Eurasian Geography and Economics. 2009; 50(2):197–221.
- Chan KW. Migration and development in China: Trends, geography and current issues. Migration and Development. 2012a; 1(2):187–205.
- Chan KW. Crossing the 50 percent population rubicon: Can China urbanize to prosperity? Eurasian Geography and Economics. 2012b; 53(1):63–86.
- Chan KW, Zhang L. The *hukou* system and rural-urban migration in China: Processes and changes. The China Quarterly. 1999; 160:818–855.
- Chen X, Stanton B, Kaljee LM, Fang X, Xiong Q, Lin D, ... Li X. Social stigma, social capital reconstruction and rural migrants in urban China: A population health perspective. Human Organization. 2011; 70(1):22–32. [PubMed: 21516266]
- Croll E. The politics of marriage in contemporary China. New York, NY: Cambridge University Press; 1981.
- Das Gupta M, Ebenstein AY, Sharygin EJ. China's marriage market and upcoming challenges for elderly men (World Bank policy research working paper 5351). Development Research Group, World Bank; 2010.
- Demo DH, Hughes M. Socialization and racial identity among black Americans. Social Psychology Quarterly. 1990; 53(4):364–374.
- Deng Q, Gustafsson B. The *hukou* converters-China's lesser known rural to urban migrants. Journal of Contemporary China. 2014; 23(88):657–679.
- Deng Z, Treiman D. The impact of the cultural revolution on trends in educational attainment in the People's Republic of China. American Journal of Sociology. 1997; 103(2):391–428.

- Deng Y, Qin Y, Zhu H. Housing prices and mating preferences: Evidence from online daters. Singapore: Business School and the School of Design and Environment, Institute of Real Estate Studies, National University of Singapore; 2016. Unpublished manuscript
- Dodoo FN, Tempenis M. Gender, power, and reproduction: Rural3urban differences in the relationship between fertility goals and contraceptive use in Kenya. Rural Sociology. 2002; 67:46–70.
- Duan C, Sun Y. Woguo liudong renkou tongji koujing de lishi biandong [changes in the scope and definition of the floating population in China's censuses and surveys]. Renkou yanjiu. 2006; 30(4): 70–76.
- Ebenstein AY, Sharygin EJ. The consequences of the "missing girls" of China. The World Bank Economic Review. 2009; 23(3):399–425.
- Fernández R, Guner N, Knowles J. Love and money: A theoretical and empirical analysis of household sorting and inequality. The Quarterly Journal of Economics. 2005; 120(1):273–344.
- General Office of State Council. Guanyu Beijingshi renmin zhengfu, laodong renshibu qingshi jiejue bufen ganbu nongcun jiashu jinjing luohu wenti de fuhan [Response to Beijing Government. Ministry of Labour concerning the arrangement for rural family members of selected cadres to settle down in Beijing]. 1985 issued on 28 April 1985.
- Gibson CJ, Lennon E. Historical census statistics on the foreign-born population of the United States: 1850–1990 (Population division working paper NO. 29). Washington, D.C: U.S. Bureau of the Census; 1999.
- Goodkind D, Branch E. Marriage squeeze in China: Historical legacies, surprising findings. Paper Presented at the Annual Meeting of the Population Association of America; 2006.
- Gullickson A. Education and black-white interracial marriage. Demography. 2006; 43(4):673–689. [PubMed: 17236541]
- Gustafsson B, Li S. Economic transformation and the gender earnings gap in urban China. Journal of Population Economics. 2000; 13(2):305–329.
- Han L, Li T, Zhao Y. How status inheritance rules affect marital sorting: Theory and evidence from urban China. The Economic Journal. 2015; 125(589):1850–1887.
- Herman MR, Campbell ME. I wouldn't, but you can: Attitudes toward interracial relationships. Social Science Research. 2012; 41(2):343–358. [PubMed: 23017756]
- Hofferth SL, Iceland J. Social capital in rural and urban communities. Rural Sociology. 1998; 63(4): 574–598.
- Huang Y, Yi C. *Hukou*, qianyi yu juzhu fenyi-yi wuhan weili de shizheng yanjiu [*Hukou*, mobility, and residential differentiation: A case study of Wuhan]. Chengshi fazhan yanjiu. 2009; 16(6):36–46.
- Ji Y. Between tradition and modernity: "Leftover" women in Shanghai. Journal of Marriage and Family. 2015; 77(5):1057–1073.
- Ji Y, Yeung WJJ. Heterogeneity in contemporary Chinese marriage. Journal of Family Issues. 2014; 35(12):1662–1682.
- Kalmijn M. Intermarriage and homogamy: Causes, patterns, trends. Annual Review of Sociology. 1998; 24:395–421.
- Li S, Luo C. Re-estimating the income gap between urban and rural households in China. In: Whyte MK, editorOne country, two societies: Rural-urban inequality in contemporary China. Cambridge, MA: Harvard University Press; 2010. 105–122.
- Liang Z. The age of migration in China. Population and Development Review. 2001; 27(3):499–524.
- Liang Z, Ito N. Internarriage of Asian Americans in the New York City region: Contemporary patterns and future prospects. International Migration Review. 1999; 33(4):876–900.
- Liang H, Yang M. Chengshi qingnian tonghunquan bianhua jiqi yingxiang yinsu yanjiu [Research on the Chinese urban youth intermarriage circle change and influencing factor—Empirical analysis based on Chinese youth situation survey data]. Renkou yu fazhan. 2014; 20(3):43–51.
- Lichter DT, Brown DL. Rural America in an urban society: Changing spatial and social boundaries. Annual Review of Sociology. 2011; 37:565–592.
- Lu Y. Huji zhidu: kongzhi yu shehui chabie [Hukou system: Control and social disparity]. Beijing: Shangwu yinshuguan; 2003.

- Lu Y, Treiman DJ. The effect of sibship size on educational attainment in China: Period variations. American Sociological Review. 2008; 73(5):813–834.
- Lui L. Gender, rural-urban inequality, and intermarriage in China. Social Forces. 2016; 95(2):639-662.
- Lui L. *Hukou* intermarriage in China: Patterns and trends. Chinese Sociological Review. 2017a; 49(2): 110–137.
- Lui L. Marital power in inter-*hukou* families in China: An intersectionality approach; Journal of Family Issues. 2017b. 1–26.
- Malhotra A. Gender and the timing of marriage: Rural-urban differences in Java. Journal of Marriage and Family. 1997; 59(2):434–450.
- Mare RD, Schwartz CR. Income inequality and educational assortative mating: Accounting for trends from 1940 to 2003. California Center for Population Research, UCLA; 2006. Unpublished manuscript
- Meng L. Bride drain: Rising female migration and declining marriage rates in rural China. Fujian, China: Department of Economics, Xiamen University; 2009. Unpublished manuscript
- Ministry of Public Security. Gonganbu guanyu chuli hukou qianyi wenti de guiding (caogao) [The regulations of transfer of hukou registration (draft)]. 1964 issued on 14 August 1964.
- Ministry of Public Security. Guanyu chuli hukou qianyi de guiding [The regulations of transfer of hukou registration]. 1977 issued on 1 November.
- Monaghan D. Income inequality and educational assortative mating: Evidence from the Luxembourg income study. Social Science Research. 2015; 52:253–269. [PubMed: 26004461]
- Mu Z, Xie Y. Marital age homogamy in China: A reversal of trend in the reform era? Social Science Research. 2014; 44:141–157. [PubMed: 24468440]
- National Bureau of Statistics of China (NBS). [Accessed 16 February 5] 2009 nongmingong diaocha jiance baogao [2009 rural migrant worker survey and monitoring report]. 2010. http://www.stats.gov.cn/ztjc/ztfx/fxbg/201003/t20100319\_16135.html/
- National Bureau of Statistics of China (NBS). [Accessed 16 February 5] 2011 woguo nongmingong diaocha jiance baogao [2011 China's rural migrant worker survey and monitoring report]. 2012. http://www.stats.gov.cn/ztjc/ztfx/fxbg/201204/t20120427\_16154.html/
- National Bureau of Statistics of China (NBS). [Accessed 16 February 5] 2012 woguo nongmingong diaocha jiance baogao [2012 China's rural migrant worker survey and monitoring report]. 2013. http://www.stats.gov.cn/tjsj/zxfb/201305/t20130527\_12978.html
- National Bureau of Statistics of China (NBS). [Accessed 16 February 5] 2013 woguo nongmingong diaocha jiance baogao [2013 China's rural migrant worker survey and monitoring report]. 2014a. http://www.stats.gov.cn/tjsj/zxfb/201405/t20140512\_551585.html
- National Bureau of Statistics of China (NBS). [Accessed 16 February 7] National data, annual: Consumer price index (1978=100) 1978–2008. 2014b. http://data.stats.gov.cn/english/ easyquery.htm?cn=C01
- National Survey Research Center. [Accessed 15 September 12] Chuban yu fabiao [Publications using Chinese general social survey]. 2015. http://www.chinagss.org/index.php?r=index/publication
- National Survey Research Center Chinese General Social Survey Project. Zhongguo shehui chubanshe. 2009. Zhongguo zonghe shehui diaocha baogao (2003–2008) [Chinese general social survey report (2003–2008)].
- Passel J, Cohn DV, Gonzalez-Barrera A. Net migration from Mexico falls to zero-and perhaps less. Washington, D.C: Pew Hispanic Center; 2012.
- Qian Z. Breaking the racial barriers: Variations in interracial marriage between 1980 and 1990. Demography. 1997; 34(2):263–276. [PubMed: 9169282]
- Qian Z, Cobas JA. Latinos' mate selection: National origin, racial, and nativity differences. Social Science Research. 2004; 33(2):225–247.
- Qian Z, Lichter DT. Social boundaries and marital assimilation: Interpreting trends in racial and ethnic intermarriage. American Sociological Review. 2007; 72(1):68–94.
- Qian Y, Qian Z. The gender divide in urban China: Singlehood and assortative mating by age and education. Demographic Research. 2014; 31(45):1337–1364.

- Qian Y, Qian Z. Assortative mating by education and *hukou* in Shanghai. Chinese Sociological Review. 2017; 49(3):239–262. [PubMed: 29564190]
- Qiu Z, Ding H. Nongcun hunjia liudong [Marriage mobility in rural China]. Shehuixue yanjiu. 1991; 3:62–66.
- Ravallion M, Chen S. China's (uneven) progress against poverty. Journal of Development Economics. 2007; 82(1):1–42.
- Schwartz CR. Trends and variation in assortative mating: Causes and consequences. Annual Review of Sociology. 2013; 39:451–470.
- Schwartz CR, Mare RD. The proximate determinants of educational homogamy: The effect of first marriage, marital dissolution, remarriage, and educational upgrading. Demography. 2012; 49:629– 650. [PubMed: 22450676]
- Sicular T, Yue X, Gustafsson B, Li S. The urban-rural income gap and inequality in China. Review of Income and Wealth. 2007; 53(1):93–126.
- Smits J, Ultee W, Lammers J. Educational homogamy in 65 countries: An explanation of differences in openness using country-level explanatory variables. American Sociological Review. 1998; 63(2): 264–285.
- Solinger DJ. China's floating population: Implications for state and society. In: Goldman M, MacFarquhar R, editorsThe paradox of China's post-Mao reforms. Cambridge, MA: Harvard University Press; 1999. 220–240.
- Song L. The effect of the cultural revolution on educational homogamy in urban China. Social Forces. 2009; 88(1):257–270.
- Song J, Luke N. Fairy brides from heaven: Mate selection in rural China, 1949–2000. Journal of Comparative Family Studies. 2014; 45(4):497–515.
- State Council. Pizhuan meitanbu deng bumen guanyu meikuang jingxia zhigong jiashu luo chengzhen hukou shidian gongzuo zongjie he zai quanguo meikuang tuixing luohu gongzuo yijian de baogao de tonghzhi [Circular on approving and circulating the report submitted by Ministry of Coal and other departments on assessing the pilot experience about granting urban household registration for family members of miners and expanding the similar policy to all mines]. 1984 issued on 06 July 1984.
- State Council. Pizhuan renshibu deng bumen guanyu bufen zhuanye jishu he dangzheng guanli ganbu jiashu nongzhuanfei wenti yijian de tongzhi [Circular on approving the proposals of Ministry of Personnel, State Planning Commission, Ministry of Commerce, and Ministry of Public Security on changing the residence registration of family members of some professionals, technical staff, and the Party's and government's administrative cadres from rural to urban areas]. 1992 issued on 22 June.
- State Council. Guowuyuan pizhuan gonganbu guanyu jiejue dangqian hukou guanli gongzuo zhong jige tuchu wenti yijian the tongzhi [Circular for approving and circulating the Ministry of Public Security's proposal for resolving some serious problems in current hukou administration]. 1998 issued on 22 July.
- Sun M, Fan CC. China's permanent and temporary migrants: Differentials and changes, 1990–2000. The Professional Geographer. 2011; 63(1):92–112.
- Torche F. Educational assortative mating and economic inequality: A comparative analysis of three Latin American countries. Demography. 2010; 47(2):481–502. [PubMed: 20608107]
- Treiman DJ. The "difference between heaven and earth": Urban–rural disparities in well-being in China. Research in Social Stratification and Mobility. 2012; 30(1):33–47.
- Tucker C, Hook JV. Surplus Chinese men: Demographic determinants of the sex ratio at marriageable ages in China. Population and Development Review. 2013; 39(2):209–229.
- Tuljapurkar S, Li N, Feldman MW. High sex ratios in China's future. Science. 1995; 267(5199):874– 876. [PubMed: 7846529]
- United Nations Statistical Division (UNSD). [Accessed 15 March 21] United Nations demographic yearbook 2011, table 25: Divorces and crude divorce rates by urban/rural residence: 2007–2011. 2011. http://unstats.un.org/unsd/demographic/products/dyb/dyb2011/Table25.pdf/
- Wang W. The rise of intermarriage: Rates, characteristics vary by race and gender. Washington, D.C: Pew Social & Demographic Trends; 2012.

- Wang FY, Wong RS. From reds to riches: Contemporary changes of educational assortative mating in China. Research in Social Stratification and Mobility. 2017.
- Wang F, Zuo X. Inside China's cities: Institutional barriers and opportunities for urban migrants. American Economic Review. 1999; 89(2):276–280.
- Whyte MK. The paradoxes of rural-urban inequality in contemporary China. In: Whyte MK, editorOne country, two societies: Rural-urban inequality in contemporary China. Vol. 16. Cambridge, MA: Harvard University Press; 2010. 1–25.
- World Health Organization. [Accessed 18 May 21] Global health observatory data repository. Life tables by country China. 2018. http://apps.who.int/gho/data/?theme=main&vid=60340
- Wu X, Treiman DJ. The household registration system and social stratification in China: 1955–1996. Demography. 2004; 41(2):363–384. [PubMed: 15209045]
- Wu X, Treiman DJ. Inequality and equality under Chinese socialism: The *hukou* system and intergenerational occupational mobility. American Journal of Sociology. 2007; 113(2):415–445.
- Xiang J. Gendered pathways to *hukou* status mobility in China. Chinese Journal of Sociology. 2015; 1(2):231–253.
- Xie Y, Zhou X. Income inequality in today's China. Proceedings of the National Academy of Sciences. 2014; 111(19):6928–6933.
- Xing C, Nie H. Chengli xiaohuoer yudao nongcun guniang: yinger *hukou*, huji gaige yu kuahuji tonghun [When city boy falls in love with country girl: Baby's *hukou*, *hukou* reform and inter*hukou* marriage]. Shijie jingji wenhui. 2010; 4:1–18.
- Xu Q, Perkins DD, Chow JCC. Sense of community, neighboring, and social capital as predictors of local political participation in China. American Journal of Community Psychology. 2010; 45(3–4): 259–271. [PubMed: 20229225]
- Yang Y. Zhongguo renkou qianyi yu fazhan de changqi zhanlue [Internal migration and long-term development strategy of China]. Wuhan: Wuhan chubanshe; 1994.
- Yeung WJJ, Hu S. Coming of age in times of change: The transition to adulthood in China. The ANNALS of the American Academy of Political and Social Science. 2013; 646(1):149–171.
- Zhang Z, Treiman DJ. Social origins, *hukou* conversion, and the wellbeing of urban residents in contemporary China. Social Science Research. 2013; 42(1):71–89. [PubMed: 23146599]
- Zhang M, Zhu CJ, Nyland C. The institution of *hukou*-based social exclusion: A unique institution reshaping the characteristics of contemporary urban China. International Journal of Urban and Regional Research. 2014; 38(4):1437–1457.
- Zhao W. Shilun 20 shiji moqi guojia jiejue fuqi liangdi fenju de huji zhengce [A tentative discussion on the national household registration policy for the couple separation in the late 20th century]. Zhengzhou daxue xuebao (zhexue shehui kexueban). 2012; 45(3):142–146.
- Zheng B, Wu X. *Hukou*, "nongzhuanfei" yu zhongguo chengshi jumin zhong de shouru bupingdeng [Household registration, urban status attainment, and social stratification in urban China]. Shehuixue yanjiu. 2013; 1:160–181.

# Appendix A. Data appendix: identifying hukou converters

Because there is no single and consistent *hukou* origin question across each of the three CGSSs, *hukou* converters are identified somewhat differently by dataset. Table A1 shows available *hukou* information for each CGSS dataset. In the 2003 CGSS, we identify respondents (and/or spouses) as converters if they had ever converted *hukou* or reported reasons for *hukou* conversion.

In the 2006 CGSS, the "ever converted *hukou*" variable and the "reasons for *hukou* conversion" variable are not available for both members of couples. Because of this, we use the "timing of obtaining urban *hukou*" variable and year of birth to determine whether respondents converted. Given that a newborn's *hukou* status is generally registered within the first year of birth, we define respondents who obtained an urban *hukou* when they were

(1) (5) &

(5) (6) &  $(6)=rural^{b}$ 

(5)=rural, or

Reported (3)

two years old or older as *hukou* converters. In the 2006 CGSS, these questions are not available for spouses. Instead, converter spouses are identified by their *hukou* information at three time points: their current *hukou* status, their *hukou* status at first marriage, and their mothers' current *hukou* status. Together, these indicate *hukou* destination, *hukou* status before first marriage, and *hukou* origin respectively. If a spouse's *hukou* destination indicated by current *hukou* status is urban and the *hukou* status at the time of first marriage was rural, the spouse is classified as a converter. Another possibility would be conversion before first marriage. If a spouse's *hukou* status at the time of first marriage was urban and the spouse's *hukou* origin indexed by mother's current *hukou* status was rural, the spouse is also identified as a converter.

In the 2008 CGSS, the "timing of obtaining urban *hukou*" and "reason for *hukou* conversion" variables identify respondents' conversion status. Given that respondents specify whether they were born with urban *hukou* in the "timing of obtaining urban *hukou*" question, respondents are defined as converters if they report a valid year of conversion. If respondents do not report the year of obtaining urban *hukou*, but instead, report a reason for *hukou* conversion, they are also classified as *hukou* converters. Given the lack of information on the reason for *hukou* conversion for spouses, spouses are only identified as converters if they reported a valid year of *hukou* conversion.

#### Table A1

Whether Variable is Available in CGSS Data (1) Current Hukou (5)(6) (2) Ever (3) (4) Reason Strategies Converted Timing of for Hukou Hukou Mother's to Identify Hukou Obtaining Status at Conversion Current Converters Urban First Hukou Hukou<sup>a</sup> Marriage Respondent's Hukou CGSS2003 Yes Yes No Yes No Yes Reported (2) or (4) CGSS2006 Yes No Yes No Yes Yes (3) year of birth CGSS2008 Yes No Yes Yes No Reported (3) Yes or (4) Spouse's Hukou CGSS2003 Reported (2) Yes Yes No Yes No No or (4)

Available hukou information and the strategies to identify hukou converters by dataset.

<sup>a</sup>For CGSS2006, the respondents only reported the year but did not specify whether they were born with urban *hukou*. To differentiate converters from those with urban origin, converters are defined as respondents/spouses who converted to urban *hukou* after one year of age.

No

No

Yes

No

Yes

No

No

Yes

 ${}^{b}(1)$  (5) identifies who convert after first marriage. (5) (6) applies to people born before 1998 and identified people born with rural *hukou* and convert to urban before first marriage.

Res Soc Stratif Mobil. Author manuscript; available in PMC 2019 August 01.

No

No

CGSS2006

CGSS2008

Yes

Yes















# Fig. 4.

Predicted probability of *hukou* intermarriage by marriage cohort and conversion type. *Notes:* UC-individual = intermarriage between urban origin *hukou* holders and converters who converted because of their individual achievements. UC-family-related = intermarriage between urban origin *hukou* holders and converters who converted for family reasons. UC-collective = intermarriage between urban origin *hukou* holders and converters who converted for converters who converted for collective reasons. *Source*: 2003 Chinese General Social Survey.

Author Manuscript

Logistic regression models of hukou origin intermarriage. Sources: 2003, 2006, and 2008 Chinese General Social Survey, 1990 1 percent census data and 2000 0.95 per thousand census data, and 1989–2009 China Health and Nutrition Survey.

	Model 1		Model 2		Model 3		Model 4	
Variable	OR <sup>a</sup>	SE	OR	SE	OR	SE	OR	SE
Constant	0.24	0.03 ***	0.25	0.03 ***	1.01	0.78	0.70	0.96
Marriage Cohort								
1958-1964(omitted)	I	I	I	I	I	I	I	I
1965–1969	1.16	0.17	1.16	0.17	I	ļ	I	ļ
1970–1974	0.91	0.14	0.91	0.14	I	I	ļ	I
1975–1979	1.07	0.15	1.07	0.15	I	I	I	Į
1980–1984	0.95	0.12	0.95	0.13	I	I	ļ	I
1985–1989	0.98	0.13	0.99	0.13	I	I	Ι	I
$1990-1994^{b}$	1.15	0.15	1.15	0.16	I	I	I	I
1995–1999	1.47	$0.19^{**}$	1.46	$0.20^{**}$	1.15	0.12	1.13	0.13
2000–2008	1.71	0.22	1.70	$0.24^{***}$	1.27	0.19	I	I
Husband's Education								
Primary School or Less (omitted)	I	I	I	I	I	I	I	I
Junior High School	I	I	0.92	0.09	1.45	0.29	1.44	0.34
Senior High School	I	I	0.96	0.10	1.78	0.37 **	1.47	0.37
College or More	I	I	1.07	0.13	1.73	0.39	1.59	0.44
Wife's Education								
Primary School or Less (omitted)	I	I	I	I	I	I	ļ	I
Junior High School	I	I	1.09	0.09	0.97	0.15	1.11	0.19
Senior High School	I	I	0.98	0.09	06.0	0.15	1.01	0.19
College or More	I	I	0.97	0.12	1.05	0.21	1.04	0.25
GDP Per Capita (Log)	I	I	I	I	0.78	0.07 **	0.66	$0.09 ^{**}$
Urban-Rural Income $\operatorname{Gap}^{\mathcal{C}}$	I	I	I	I	8.04	1.71 ***	11.45	3.61 ***
Relative Size of the Rural-to-Urban	I	I	I	I	I	I	0.99	0.01

	Model 1		Model 2		Model 3		Model 4	
Variable	OR <sup>d</sup>	SE	OR	SE	OR	SE	OR	SE
Migrants (in %)								
Absolute Size of the Rural-to-Urban	I	I	I	I	I	I	1.18	0.10
Migrants (Log)								
Sex Ratio <sup>d</sup>	I	I	I	I	I	ļ	1.00	0.001
N	11954		11954		4790		3156	
-2 Log Likelihood	99.87		107.38		234.05		113.47	
Model Chi-square( <i>df</i> )	60.91 (8)		66.26 (14)		129.62 (10)		86.96 (12)	
Notes:								
$_{p<0.05}^{*};$								
p < 0.01; p < 0.01;								
p < 0.001.								
$^{a}$ OR = odds ratio. SE = standard error.								
b Omitted marriage cohort for Model 3 $a$	and Model 4							

<sup>c</sup>Urban-Rural Income Gap=llog(median husband's income by husband's *hukou*)-log(median wife's income by wife's *hukou*).

 $d_{\rm Sex}$  Ratio = 100\*Rural-to-urban migrant malej/Rural-to-urban migrant femalej, where *j* denotes age group 15–39.

Wang and Schwartz

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

### Table 2

Multinomial logistic regression of hukou intermarriage types.

*Sources*: 2003, 2006, and 2008 Chinese General Social Survey, 1990 1 percent census data and 2000 0.95 per thousand census data, and 1989–2009 China Health and Nutrition Survey.

	Rural Wife + Urban Husband Versus Homogamy		Rural Husband + Urban Wife Versus Homogamy	
Variable	Odds Ratio	SE	Odds Ratio	SE
Constant	0.40	0.38	0.67	0.79
Marriage Cohort				
1990-1994 (omitted)	-	-	_	_
1995–1999	1.16	0.15	1.23	0.20
2000-2008	1.04	0.19	2.00	0.43**
Husband's Education				
Primary School or Less (omitted)	_	_	-	-
Junior High School	1.34	0.31	1.92	0.65
Senior High School	1.78	0.43*	1.91	0.66
College or More	1.27	0.34	2.84	1.04 **
Wife's Education				
Primary School or Less (omitted)	-	-	_	_
Junior High School	0.84	0.15	1.58	0.47
Senior High School	0.67	0.13*	2.01	0.62*
College or More	0.78	0.19	2.22	0.77*
GDP Per Capita (Log)	0.83	0.09	0.69	0.09**
Urban-Rural Income Gap <sup>a</sup>	14.07	3.27 ***	0.74	0.22
Ν	4790			
-2 Log Likelihood	418.9			
Model Chi-square (df)	276.77 (20)			

p < 0.05;

p < 0.01;

\*\*\* p<0.001.

<sup>a</sup>Urban-Rural Income Gap=|log(median husband's income by husband's *hukou*)-log(median wife's income by wife's *hukou*)|.

#### Table 3

Decomposition of trends in hukou origin intermarriage.

Marriage Cohorts	Percentage point change	% Due to Rural- Urban Intermarriage	% Due to Converter-Urban Intermarriage	Total
85-89 to 90-94	2.62%	23%	77%	100%
90–94 to 95–99	4.41%	13%	87%	100%
95–99 to 00–08	3.05%	151%	-51%	100%
85–89 to 00–08	10.09%	58%	42%	100%