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# Personal resources, family factors, and remarriage: an analysis based on CFPS2010 data

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## Abstract

Based on China Family Panel Studies (CFPS2010) data, this paper adopts the method of event history analysis to explore the cultural logic and impact factors behind remarriage in China. The results show that an individual's remarriage is influenced by personal resources and family factors. Family size, social network of relatives, and whether one belongs to an expanded family affect the individual's remarriage. Except for education, an individual's resources generally have a positive effect on remarriage. However, due to differences between urban and rural areas and the different functions of family roles, the impact of the above factors on remarriage also differs in terms of gender and the urban-rural division.

**Keywords:** Personal resources, Family factors, Remarriage, Event history analysis

## Background

Along with the diversification and individuation of people's life style, marital conflicts have become more and more frequent. Meanwhile, progress in material life and the improvement of medical care have prolonged life expectancy to a great extent. This has enabled the average life of a marriage to be longer than in any other period in history, thus increasing the risk of disintegration of a marriage in the late period of marriage life to some extent. This has also seemingly confirmed what Goode (1986) claims: the power of modernization will bring about tension in the marital relationship, but divorce may ease such tension. Therefore, marriage disintegration and remarriage are now regarded as one of the predictable consequences of the process of modernization in China. The data released by National Civil Affairs Department showed that the number of divorces was 3,500,000 in 2011, while it was 2,455,000 in 1990. With the number of divorces increasing, there has also been a significant rise in the number of remarriages. The Civil Affairs statistics report shows that while the number of remarriages in 1990 was only 722,400, it had increased to 2,811,000 in 2011 (Chinese Ministry of Civil Affairs 2013). The issue of remarriage brought by the rapid growth in the number of divorces has become a hot topic among scholars and common people. Of course, scholars show concern about remarriage not only because of its large number, but also because of the great sociological importance behind the issue. Generally, marriage disintegration damages the family members' welfare to some degree, but remarriage is an important approach to regaining

happiness as a family. Remarriage can ensure that the family is complete and will extend the family line, and a complete family is beneficial to the healthy growth of the younger generation. In addition, remarriage can also help strengthen the efficiency of the household's financial budget and expenditure. Therefore, the author believes that it is of great theoretical importance and practical value to conduct a study on the act of remarriage and its related factors during the period of social transition, starting from the standpoint of localization to determine the cultural logic that has an impact on the act of remarriage in China.

Based on the literature review and related theories concerning remarriage, the paper uses the method of Event History Analysis (EHA) to analyze the China Family Panel Studies (CFPS2010) data collected in the follow-up study of Chinese families and discuss how personal resources and family factors influence the individual act of remarriage from the perspectives of both individuals and families. Taking into account the uniqueness of the Chinese cultural situation, the paper makes a comparison, an interpretation, and a reflection on the act of Chinese remarriage and its influencing factors from the standpoint of localization.

## **Theoretical perspectives and hypotheses**

### ***Marriage market theories***

The marriage market refers to the sum of male and female mate choices (Lamanna and Riedmann 1991). In fact, it is not a market in a strict sense, being quite different from a commodity market. Marriage market theories aim at elaborating on a certain potential relationship of the supply and demand of mate choice in a certain time and range (Chen 2004). The marriage market provides an important theoretical perspective for interpreting the act of marriage. However, since most marriage market theories are based on a first marriage, it is difficult for them to perfectly interpret the act of remarriage (Kalmijin 1998). There are at least three differences between the first marriage market and the remarriage market. The first is that, quite differently from those marrying for the first time, potential digamists facing the disintegration of marriage in the middle or late period of life have their own understanding of and choice in marriage (Shechtman 2005). The second is that the market for remarriage is smaller than that of first marriages, and therefore, whether or not potential digamists will successfully marry is closely related to the number of potential spouses in the remarriage market.<sup>1</sup> The third is that potential digamists lack an effective approach to getting into the marriage market, and as a result, the efficiency of the remarriage market is far from satisfactory. For example, those at the first marriage stage may have access to the marriage market by means of schooling, getting involved in volunteer associations, or taking part in public activities, among other things (Kalmijn 1994). In contrast, most digamists are either at the late stage of their youth or in the middle or late period of their life. For them, the period of formal education was over long ago, and they have a comparatively low degree of willingness to get involved in volunteer and public activities. As a result, they have far fewer opportunities to meet potential spouses (Wallerstein et al. 1995). Because of the various differences between the first marriage and remarriage, marriage market theory is restricted in its explanatory power in research on the act of remarriage. Nevertheless, what cannot be denied is that marriage market theories are still of great reference value to our understanding of the external constraint condition of marriage.

### ***Individual choice***

Remarriage is in fact a personal choice and is therefore another important research approach to studying the influencing factors of remarriage from an individual perspective. The microfactors influencing remarriage mainly include gender, age, income, education, profession, and minor children. Most empirical research centers on these factors.

**The influence of education and income on remarriage** In many studies, education and income are regarded as two closely related factors; however, each one has independent importance in their function in remarriage.

In Western academic circles, a human being is generally considered an individual in the sense of economic rationality. When choosing spouses, people tend to weigh advantages and disadvantages and stay away from potential risks. Under such a presupposition, some influential marriage theories have come into being, of which Becker's marriage theory "gains to trade" and Easterlin's "relative income hypothesis" are two that have been influential. The former believes that in the marriage, market men and women reaching their marriageable age are potential marriage transaction partners; when the two sides can predict that they will both benefit from marriage, they will make the decision to marry (Becker 1981). However, since gender differences in social roles decide that women have to make a choice between domestic labor and the labor market, it is likely that when the expected economic income is high, women may choose to enter the labor market, resulting in a low rate of marriage. The latter, however, holds the view that men or women will not take marriage into consideration until they believe that their lowest life guarantee is ensured. They want to take such a life guarantee as a reference to what they could get when they were children taken care of by their parents (Easterlin 1978). In other words, those potential marriage partners with a better economic income are more likely to get married. This means that the advantage of economic income is helpful in increasing the probability of remarriage. Despite the fact that both theories are supported by quite a number of empirical studies, some scholars criticize the hypothesis as centering on purely economic factors considered by rational people. This is because the act of marriage cannot be rationally calculated like a commodity trade; moreover, some nonrational factors such as affect are also involved in marriage. Probably due to their consideration of these factors, Oppenheimer and Lew (Oppenheimer and Lew 1995) direct their attention to studies on the degree of marriage matching difficulty, pointing out that those with a high income may not necessarily marry quickly; on the contrary, they may put off their marriage because it takes more time for them to find a suitable spouse.

As with economic income, level of education has also received quite a lot of attention in empirical studies on remarriage; yet, to a great extent, it is different from the former in function. On the one hand, as a kind of human capital, education can help enrich personal resources so as to enhance personal attraction and promote the position of the individual in the marriage market; this is beneficial to those looking for a spouse (Wolf and Macdonald 1979; Yue et al. 2006). On the other hand, divorced people who are well educated are often restricted by the number of potential remarriage partners with the same level of education; this may result in a low probability of remarriage (Goldman et al. 1984). The negative effect of education on remarriage is reflected more noticeably in women's remarriage decision making than in men's. For example, based

on the analysis of the figures of the national population census in 2000, Yang (2007) believes that while education gives men more chances to remarry, it has a negative effect on women's remarriage. Although education helps enlarge the quantity of personal resources, it also helps individuals become more independent and reduces their reliance on marriage, thus lowering their willingness to remarry. Of course, there is another way of interpreting the phenomenon—well-educated women who want to have a second marriage are restricted by the number of potential remarriage partners with the same level of education in the marriage market, thus reducing the degree of probability of remarrying (Goldman et al. 1984). It is obvious that as a kind of resource, education can have opposite effects on individuals in their act of remarriage.

**The mutual influence of employment and demographic factors** In studies on remarriage, the factor of employment is another variable that also receives a noticeable amount of attention in addition to the aspects of income and education. Due to the fact that there is a noticeable gender difference in the influence of employment on remarriage, the mutual influence of this difference and demographic factors is generally taken into account in the analysis of the effect of employment on remarriage.

Some studies claim that women usually have to make a choice between domestic labor and the job market; as a result, men tend to have a higher rate of remarriage than women.<sup>2</sup> This may result from individual rational choice or from the different requirements imposed by society on the different genders concerning their entrance into marriage. From the perspective of economic rationality, according to the present level of “quasi wages” there is a comparatively low degree of willingness for women to be engaged only in housework, whereas men are more likely to benefit from marriage. As a result, the remarriage rate among men is higher. This hypothesis has been supported by recent empirical studies (Shechtman 2005). In addition, the lower rate of remarriage among women may also be associated with society's different requirements for men and women. For instance, there is a preference for younger women, but there is usually no such requirement for men. This is another reason for the difference in the remarriage rate between men and women (Shechtman, 2005).

When the factor of minor children is taken into account, a change occurs in the choice mechanism. After the disintegration of a marriage, the mother is the custodian of children in most cases, and therefore, the existence of minor children may lead to a change in decision making on remarriage. Relatedly, many studies find that individuals may find their conditions have worsened simply because of their minor children (Hampton 1975; Espenshade 1979). Women experience the pressures of child rearing; because of their lack of work experience, many are in a disadvantageous position in the job market and need to acquire financial support by means of remarriage. In this sense, child rearing is the driving force for women to remarry as soon as possible. However, some studies also point out that the factor of children may play a negative part in remarriage (Sweet 1973; Becker et al. 1977). First, if a man looking for a potential remarriage partner chooses a woman with children, he has to take the responsibility and pressure of child rearing into consideration. Second, women have to spend a significant amount of time and energy on child rearing and thus have fewer chances to contact potential remarriage partners; this definitely slows down the process of remarriage. As Graff (2003) state, in order to look after their children,

women have to reduce the number of opportunities to join some public activities such as parties or physical exercises and therefore lose opportunities to find their potential spouse. In fact, taking part in public activities is one of the important ways of meeting members of the opposite sex (Wallerstein and Blakeslee 1989). Additionally, some researchers have also determined that an interactive function exists between the age of a remarriage partner and the state of whether the person has children. The data analysis of current population survey (CPS) in 1975 by Koo and Suchindran (1980) shows that whether the factor of children has an effect on remarriage is related to the age of the individual at the time that the disintegration of the first marriage occurs. Women under twenty-five with no children tend to remarry as soon as possible because they have a stronger desire to start a new family and produce the next generation (Lamped and Peggs 1999). In contrast, when women are above thirty-five and have no children, their remarriage chances are reduced. There is no difference found in this respect in the age group of remarried women between twenty-six and thirty-four. In short, the present studies show that age, minor children, and employment all have an impact on remarriage, but so far, there is no agreement in the conclusions of empirical studies.

#### ***The absence of the local perspective: research hypotheses***

A number of marriage theories originating from Western academic circles have provided some enlightenment in understanding the act of Chinese remarriage. Nevertheless, if the research hypotheses for the review of Chinese people's remarriage were based directly on Western theories, there could be some biases in the research; in addition to the fact that the practice of marriage is influenced by individuals' rational choice, it has fundamental differences in different cultural situations. Moreover, China is a nation with thousands of years of an agricultural civilization, and its traditional culture is deeply rooted in marriage practices.<sup>3</sup> Therefore, the author believes that study on Chinese people's remarriage must utilize a new interpretation that takes local culture into consideration, and uses related Western theories as a source of reference. In the following sections based on the standpoint of local culture, the research hypotheses are constructed by means of studying the differences in the influence of social factors on marriage in China and in the West.

**The influence of families and clans** According to marriage market theories, gains-to-trade theories, and the relative income hypothesis, an individual is considered to be the main actor and the master of the fate of marriage. All these theories assume that a rational individual is able to decide whether he or she will remarry by balancing the advantages and disadvantages of marriage but without taking family factors into account. In fact, the marriage theories that exclude the family dimension obviously do not apply to the Chinese situation and therefore are unlikely to perfectly interpret the practice of remarriage in China. In the Chinese culture, marriage is never regarded as an act of individuals but instead is influenced by the family, the clan, and the interpersonal network built around the family (Fei Xiao-tong 1998). As Jin Yao-ji states (2010), a Chinese family is "a closely integrated entity"; all social value is imparted from the family to the individual by family education as well as by the function of socialization. Therefore, the family is of great importance to Chinese people's marriage (Fei Xiao-tong 1998; Jin 2010). The practice of getting married and having children is considered an important symbol of family prosperity. In contrast, the disintegration of an individual's marriage arouses concern and anxiety

in other family members, especially the divorced individual's parents.<sup>4</sup> In Chinese cultural situations, the range of parents' responsibilities for their children appears to be boundless, from giving birth and bringing them up to taking care of grandchildren. The anxiety and concern from family members will have two effects on individuals' remarriage. One is that these feelings produce an invisible pressure on the divorced, forcing them into another marriage. The other is that either the parents or other family members tend to make use of their communication network to provide an effective approach for the divorced to meet new marriage partners, and this also provides a momentum toward remarriage.

Similar to the function of families, clans also have an active effect on remarriage. In general, a clan is made up of several families; different families belonging to the same clan have a closer relationship than independent families without a clan relationship. As a result, when marriage disintegration occurs to a clan member, he or she will receive concern and help from the members of other families in the same clan. This concern can also be a kind of pressure that may urge the person to remarry quickly. In addition, families belonging to the same clan may have a broader communication network that increases the possibility of the divorced person finding a new marriage partner. According to the dependence relationship between families, clans, and marriage, the author believes that families, clans, and the kinship network built around the family all have a promoting effect of remarriage for an individual. The first hypothesis, together with its sub-hypotheses, is based on the above factors.

Hypothesis 1. On the whole, families and clans have a promoting effect on an individual's remarriage.

Hypothesis 1a. In a family where parents are alive, the probability of their children's remarriage increases.

Hypothesis 1b. The more members a family has, the higher the probability will be for an individual's remarriage.

Hypothesis 1c. The probability of an individual's remarriage increases in families in which relatives visit frequently or in families with a large-scale kinship network.

Hypothesis 1d. There is an increase of the probability of a divorced individual remarrying in a family attached to a clan.

**The influence of personal resources and the differences between urban and rural areas and between genders** In addition to family factors, the factor of personal resources also influences remarriage. According to theories concerning the marriage market and choice of marriage partner, individuals with an advantageous position in resources will take the initiative in choosing their marriage partners. Theoretically, factors such as level of education, engagement in nonfarm work, good income, and house ownership have a positive effect on remarriage. However, due to the fact that a unique urban and rural difference exists in China as well as a difference in gender roles under the influence of the traditional culture, the degree of the influence of personal resources may also vary in different remarriage groups.

China's unique household registration system has led to a division between urban and rural areas; this limits not only the free movement of urban and rural residents but also the integration of the marriage market between urban and rural areas. The only-child

policy instigated in the 1980s together with the rapid spread of cheap and practicable technology of fetal sex identification and induced abortion has led to the widespread phenomenon of sex imbalance occurring at birth, especially in rural areas. It is very common for men in rural areas to experience difficulty in finding a marriage partner. More significantly, once a marriage disintegrates, remarriage for men is even more difficult. Quite different from these issues for men, women's prospects for remarriage are much better because of the scarcity of women. In urban areas, there is a different phenomenon regarding the degree of difficulty of remarriage for men and women. Influenced by the difference between urban and rural areas and the culture of "marrying a man, following a man," few women want to lower their social status by marrying a country man, and therefore, women have a limited number of choices in remarriage. In urban areas, men are in an advantageous position compared to women in regard to remarriage. Based on this fact, we propose the second hypothesis:

Hypothesis 2. In rural areas, men's probability of remarriage is lower compared to women's; however, in urban areas, men's probability of remarriage is higher compared to women's.

This gender difference can also be seen in the degree and way of the influence of personal resources on remarriage. On the one hand, the traditional family division of labor leads to differences between men and women in their spouse-choosing preferences. In this family labor division pattern "the man goes out to work while the woman looks after the house," the role of the man is thus defined as the one that earns money to support the family, whereas the woman is the main provider of domestic work. Despite the fact that today a large number of women are also engaged in employment and contribute to the family income, the family role definition of the two sexes has basically remained unchanged.<sup>5</sup> This expected role difference results in variation in the relative importance of personal resources for men and women in the process of choosing remarriage partners. Accordingly, men with better education, higher income, engagement in nonfarm work, better housing conditions, and so on tend to remarry more easily. On the other hand, despite the fact that the advantage of owning personal resources may enhance women's attraction in the remarriage market, it may also make them less dependent on marriage and reduce their willingness to remarry, resulting in the reduction of the possibility of remarriage because of life's pressures. In addition, the rules of choosing a spouse make it more difficult for women with an advantageous position in personal resources to find a matching spouse in the remarriage market, and this may retard the progress of remarriage. The third hypothesis of the paper is proposed based on the above analysis.

Hypothesis 3. The advantages of personal resources such as education, income, and housing conditions are beneficial to men's quick remarriage, but for women, those advantages are weakened because of the coexistence of two different functions.

**The influence of employment, minor children, and age on remarriage** Different from some Western welfare states, the female labor-participation rate in China is comparatively high. The 1990s witnessed the rise of migrant workers, which encouraged

many rural women, who had been mainly looking after their homes and performing some farm work, to join the labor force. According to statistical data issued in the USA in 2009, the Chinese female labor-participation rate was approximately 70 %, the highest rate in the world.

There are several reasons for maintaining a high rate of female labor-participation over a long period. The first is that in addition to increasing income for the household, employment allows women to improve their marginalized position in the family. To some extent, this has reduced their economic reliance on men, enabling them to achieve more equal rights within the household. Second, the traditional role of grandparents in Chinese families allows many women with children to invest more time in employment since childcare is not an issue. Third, since governments have not yet established a perfect social security system, women with children and a low income are forced to continue to work to earn a living after a divorce. What has been described here is quite different from what is stated in Western theories: when payment in the job market is higher than the expected profit obtained from housework, women want to enter the job market and put off marriage. The assumption accepted in Western theories—that individuals make a choice between employment and marriage—may not exist in the Chinese community.<sup>6</sup> Taking the above analysis into consideration, we believe that women's participation in the labor force should not be taken as a deterring factor for remarriage; on the contrary, women may get more chances to meet members of the opposite sex at work, further promoting remarriage. For men, employment is a kind of resource. A well-paying job obviously enhances men's advantages in choosing a spouse and promotes their remarriage. Therefore, the fourth hypothesis is based on the above analysis.

Hypothesis 4. For both men and women, employment can promote rather than deter remarriage, i.e., employment has a positive effect on remarriage regardless of an individual's gender.<sup>7</sup>

The influence of minor children is an issue that many digamists cannot avoid. Whether the existence of minors in a family will discourage remarriage or promote it has not yet been established in previous empirical studies. In the Chinese community, there are two aspects concerning the issue of child rearing that differ from the practice in Western welfare states. One is that in China childcare is provided by the family in most cases, and the other is that the traditional role of grandparents is popular with Chinese families. Because of these differences, the influence of minor children on remarriage may take different functions and forms.

In the Chinese community, once a divorce occurs, the individual that is expected to independently bring up the children faces economic pressures, which obviously has a negative effect on remarriage. However, such pressure may also produce a positive effect, that is, the economic pressure forces the individual to actively look for a potential remarriage partner in order to raise the children together, lessening the economic pressure. The author believes that in the Chinese community the influence of minors on remarriage is more positive than negative since child rearing is costly not only in money but also in time. Accordingly, if there is no one else available to help look after the children, the divorced individual will not be able to take a full-time job. This will make the divorced individual's circumstances even



worse, given he/she will have a lower income. Therefore, actively looking for another marriage mate to rebuild a new family is the best solution. Under these circumstances, individuals are not only greatly motivated but will also take a status-lowering strategy in order to achieve remarriage.<sup>8</sup> However, with the grandparenting tradition available in China, divorced individuals with parents may have their childcare needs taken care of and will thus be able to invest more time in employment. In these circumstances, divorced individuals may have the time necessary to find a suitable remarriage mate, thus delaying the process of remarriage. Accordingly, the fifth hypothesis proposes

Hypothesis 5. On the whole, the existence of minor children has a positive effect on remarriage. A divorced individual living with minors is more likely to get remarried. Hypothesis 5a. Because of the gender role difference, men usually have difficulty raising minor children. Men with minor children are thus more likely to remarry than women. Hypothesis 5b. With the grandparenting tradition available, divorced individuals with living parents may have their childcare temporarily provided by their parents; this may delay their remarriage.

Studies have shown that age is also one of the important factors influencing marriage (Li and Xiaolong Wang 2014). The generally accepted convention concerning marriage suggests that marriage has a best age period, and the probability of an individual's marriage (except for those who do not want to marry) may be reduced if he or she misses their best age period. As for digamists, although most are not at their best age for marriage, they still consider youth as an advantageous resource. Generally, the younger an individual is, the better position he or she is in for remarriage. Furthermore, age has a different importance and value for males and females; age is more important for females than for males. There are two reasons for this. One is that marrying and extending the family line is crucial to Chinese families. For a remarried couple, even if both or either of the two already have children, it is still important for the remarried couple to give birth to and bring up their own child. Therefore, women who are still in the reproductive stage will be in an advantageous position in remarriage. The other reason is that in the mating culture, whether a woman is young is important to a man when choosing his marriage partner; in contrast, a woman does not attach much importance to a man's age when choosing a marriage partner. As Shechtman (2005) points out, the society's overcritical demand for women's youth is one of the important reasons that older women experience difficulties in marriage. The sixth hypothesis is established on the basis of the above analysis.

Hypothesis 6. Age generally has a negative impact on remarriage. The probability of remarriage decreases as individuals' age increases. A difference exists between men and women regarding the influence of age on remarriage, i.e., the negative effect of age on remarriage is stronger for females than for males.

## **Methods**

### **Data sources and operationalization of variables**

Based on data from China Family Panel Studies (CFPS2010),<sup>9</sup> the research was conducted by the Institute of Social Science Survey. The data cover questions on marital

history, which is extremely useful for research on remarriage. In regard to sampling, the following three aspects were taken into consideration. First, in terms of factors that influence remarriage, there may be differences between individuals who have remarried several times and those who have remarried for the first time. Data on the second remarriage were thus removed, and only those on the first remarriage were selected for analysis. Second, although people often tend to remarry after the death of their spouse, they differ greatly from divorced individuals in their motives and need for remarriage, which may exert different influences on their remarriage. Thus, the sample for this research is confined to remarriage after a divorce. Third, CFPS2010 data are based on a household survey that includes cases of families in which more than one respondent is remarried. In order to minimize the effect of similar family background on the *parameter estimates*, this research collected information on one respondent in the family, a method borrowed from Li and Xiaolong Wang (2014).<sup>10</sup> A total of 1257 samples were selected from the database for analysis, among which 1033 samples were found to be valid after removing samples with incomplete information.<sup>11</sup>

According to the research objectives, the dependable variables are operationally defined as occurrence rate of remarriage (or hazard rate of remarriage). The occurrence rate of remarriage refers to the probability ratio of remarriage that occurs over a period of time after the individual's divorce.<sup>12</sup> This research sets the ending time of the first marriage (measured in months) as a start point of the hazard period and the time of remarriage as the finish. If the respondent has not remarried, the finish time refers to the time when the survey was completed (July 2010). Those cases were treated as censored samples.<sup>13</sup>

The independent variables fall into two categories: variables indicating individual factors and the household effect. The former includes such independent variables as education, income, employment, minor children in the household or not, and housing conditions. The latter consists of independent variables such as family size, whether the respondent's parents are still alive, size of the social network of relatives, and whether the respondent belongs to a clan. In addition, registered permanent residence, age at the time of divorce, gender, nationality, and regions are listed as control variables.

Operationalization: (1) Age at the time of divorce. This is based on the birth date and divorce date. Desire and motives for remarriage may vary depending on respondents' age when their first marriage ended. Lampard and Peggs (1999) classify age into four groups: below 25, 25–34, 35–44, and 45 and above. (2) Education. Since the questionnaires completed by individuals included details about educational background, level of education was easily divided into four categories: no formal education, compulsory education (primary schools and junior middle schools), secondary education (senior high schools and secondary vocational schools), and higher education (in higher vocational schools and above). (3) Income. This factor was measured by logarithm of annual income. Employment (nonagricultural job or not) was operationalized as a dichotomous variable, as well as gender (female or not) and nationalities (Han nationality or not). (4) Region. This was defined as a categorical variable. The regions in China were geographically divided into three areas: western region, central region, and eastern region, with western region as a reference category. (5) Housing conditions. This was measured by two variables indicating housing condition levels and whether or not respondents have housing problems. Interviewers rated housing condition level on a scale from 1 to 7, with 1

standing for the worst housing conditions and 7 for the best, in accordance with the housing conditions in the area where the respondent lived. It was defined as a continuous *variable*. Whether or not respondents have housing problems was operationalized as a dichotomous variable (those with housing problems were treated as a reference category).<sup>14</sup> (6) Family effect. This was measured by four variables, including family size (a continuous *variable*); whether respondents' parents are still alive (a dichotomous variable, with those who have lost both parents as a reference category); size of social network of relatives (a dichotomous variable), measured by the number of relatives paying visits during the Chinese Lunar New Year; and whether or not the respondent belongs to a clan (a dichotomous variable), measured by the existence of a complete pedigree of the clan (families with complete pedigrees of the clan were treated as belonging to a clan and those without complete pedigrees were sorted as the reference category) because a complete pedigree tends to indicate the existence of a clan or a large family and a family with a complete pedigree of the clan is likely to belong to it.<sup>15</sup> (7) Minor children (children under the age of eighteen) in the household. This was defined as a polychromous variable, referring to individuals with no minor children (reference category),<sup>16</sup> those who have minor children but do not live with them, or those who live with their minor children.

### Methods and strategies of analysis

The Cox proportional hazards model, a frequently used model in history event analysis, was employed to study Chinese remarriage and its influencing mechanism. Event history analysis has the advantage of simultaneously providing information on censored samples and time-varying variables. The advantages of the Cox proportional hazards model are that referring to any theoretical distribution is unnecessary, and the *parameter estimates* are stable.

The model can be expressed as  $h(t) = h_0(t)\exp(\beta_1x_1 + \beta_2x_2 + \dots + \beta_kx_k)$  or equally as  $\ln[h(t)] = \ln[h_0(t)] + \beta_1x_1 + \beta_2x_2 + \dots + \beta_kx_k$ , in which  $h(t)$  is the hazard rate for failure over the time  $t$  and  $h_0(t)$  is the baseline hazard rate<sup>17</sup>. Data analysis was divided into two parts: first, a descriptive analysis of all samples to obtain the distributive features of the sample group who remarry after the disintegration of their first marriage, and second, statistical inference, which was conducted to test the assumptions.

## Results and discussion

### Descriptive analysis of survival data

The data was analyzed by using Stata 12.0. It was converted into event history data for further descriptive analysis of certain variables. The result shows that it takes the respondent an average of 6.4 years to remarry, and the average occurrence rate of remarriage is 0.63. It takes rural respondents 5.5 years to remarry, while the duration of their urban counterparts is 6.9 years. In addition, the average occurrence rate of remarriage in rural areas is 0.73, while it is 0.57 in urban areas. The rate varies depending on gender. On average, it takes men 6.8 years to get remarried, while the figure is 5.8 for women, indicating that females remarry sooner than males. There is a regional difference in the occurrence rate of remarriage. The average duration of the time between the breakdown of the first marriage and remarriage in the western region is shorter than that in the central and eastern regions. Housing condition is an important factor influencing remarriage. Individuals with housing

problems wait 0.6 more years before they remarry than those without problems. Living with minor children accelerates remarriage to some extent and shortens the waiting period for remarriage after a divorce. This averages 7.3 years for those without minor children, 5.8 years for those who do not live with their minor children, and 3.4 years for those living with their minor children. The descriptive analysis displays an overall picture of how individual factors affect remarriage.

The K-M estimator shows that the survival rate drops dramatically during the initial stage of the breakdown of the marriage (0–5th year) and tends to be stable afterward. This indicates that there is a great possibility of remarriage during the early years after the first marriage ends, but the pace of remarriage gradually slows down or even stops. The overall patterns of remarriage are largely consistent with this reality.

### **Test of factors influencing remarriage**

#### ***The estimator of family influence***

The following two-step analysis strategy was adopted to test the effect of family factors on remarriage, which is one important objective of the paper (Table 1). First, only control variables and family-related variables were included in model 1 for estimation. Model 2 was then formed by adding individual variables with potential influence on remarriage to model 1. Finally, according to the estimators in model 1 and model 2, conclusions were drawn as to whether family factors have a stable effect on remarriage (see Table 1).

Model 1 includes family-related variables and control variables such as age, gender, region, and nationality. According to the result of the analysis, three of the four variables measuring the influence of families on remarriage have statistical significance, and the one denoting whether or not respondent's parents are still alive shows no statistical significance. Additionally, the three statistically significant variables exert a positive effect on remarriage. The result confirms hypothesis 1.

Model 2 was formed by adding all individual variables to model 1. There was almost no change in the estimates of the four family-related variables and they have statistical significance. This suggests that family-related variables have a stable influence on remarriage. The effect of families on remarriage can be explained by the parameter estimate in model 1. First, with one member added into the family, the remarriage occurrence rate of family members increased by an average of 17 % ( $e^{0.16}-1\approx 0.17$ ). This confirms hypothesis 1b, which states that the more members there are in a family, the higher the possibility of an individual's remarriage. Second, the size of the social network of relatives contributes to family members' remarriage. When one family is added to a social network, the remarriage occurrence rate of family members increases by an average of 2 % ( $e^{0.02}-1\approx 0.02$ ). This confirms hypothesis 1c, which proposes that more-frequent interaction among relatives and a larger social network of relatives leads to greater possibility of remarriage. Third, the members of a clan have a significantly higher remarriage rate. The remarriage rate of members whose families have a complete pedigree of the clan is 22 % ( $e^{0.20}-1\approx 0.22$ ) higher than that of members without it. These results verify hypothesis 1d.

Among the four sub-hypotheses of hypothesis 1, only hypothesis 1d is not supported by data. This result may be caused by the duality of parents' influence on the remarriage of their divorced children. On the one hand, parents are actively engaged in finding new spouses for their children. However, parental matchmaking has a poor success rate. On

**Table 1** The ML estimation of remarriage rate affected by personal and family factors ( $N = 1033$ )

| Variable                                       | Model 1                 | Model 2                 |
|--|-------------------------|-------------------------|
| Gender <sup>a</sup>                            | -.38*** (.007)          | -.34*** (.08)           |
| Urban <sup>b</sup>                             | -.29*** (.08)           | -.19* (.09)             |
| Central China <sup>c</sup>                     | -.12 (.10)              | -.10 (.10)              |
| Eastern China                                  | -.12 (.10)              | -.05 (.09)              |
| Ethnic group <sup>d</sup>                      | .07 (.14)               | .21 (.15)               |
| 25–34 years old <sup>e</sup>                   | -.47*** (.13)           | -.64*** (.14)           |
| 35–44 years old                                | -.36** (.12)            | -.69*** (.13)           |
| 45 years old                                   | -.26 <sup>+</sup> (.14) | -1.01*** (.16)          |
| Family sizes                                   | .16*** (.02)            | .12*** (.02)            |
| Father or mother alive                         | -.13 (.08)              | -.03 (.08)              |
| Kinship network size                           | .02*** (.006)           | .02*** (.01)            |
| Belonging to larger family family <sup>f</sup> | .21** (.10)             | .20* (.10)              |
| Nonagricultural work <sup>g</sup>              |                         | .15 <sup>+</sup> (.08)  |
| Log income                                     |                         | -.00 (.01)              |
| Compulsory education <sup>h</sup>              |                         | -.15 (.09)              |
| Secondary education                            |                         | -.23 <sup>+</sup> (.13) |
| Higher education                               |                         | -.32 <sup>+</sup> (.17) |
| Housing conditions                             |                         | .06* (.03)              |
| Housing problem <sup>i</sup>                   |                         | .20* (.09)              |
| No minor children cohabit <sup>j</sup>         |                         | 1.10*** (.25)           |
| Minor children cohabit                         |                         | 1.13*** (.09)           |
| Log likelihood                                 | -4045                   | -3981                   |
| Chi-square statistic                           | 178.1                   | 371.2                   |

<sup>a</sup>Means  $p < 0.1$ , \*means  $p < 0.05$ , \*\*means  $p < 0.01$ , \*\*\*means  $p < 0.001$  (two-tailed test)

<sup>b</sup>Females as the reference category. <sup>c</sup>Rural areas as the reference category. <sup>d</sup>Western region as the reference category.

<sup>e</sup>Ethnic minorities as the reference category. <sup>f</sup>Age below 25 as the reference category. <sup>g</sup>Having no complete pedigrees of the clan as the reference category. <sup>h</sup>Agricultural job as the reference category. <sup>i</sup>No formal education as the reference category. <sup>j</sup>Having housing problems as the reference category. <sup>k</sup>Having no minor children as the reference category

<sup>+</sup>Means  $p < 0.1$ , \*means  $p < 0.05$ , \*\*means  $p < 0.01$ , \*\*\*means  $p < 0.001$  (two-tailed test)

the other hand, if the parents are still alive, they can offer their children some help, such as taking care of their grandchildren and sharing household chores, thus reducing the possibility of their children rushing into remarriage for financial reasons. Analysis of interaction in model 9 confirms the hypothesis.

#### **Effect estimator of individual resources**

Model 2 also assesses the effect of individual resources on remarriage. Except for education, all variables measuring individual resources had a positive effect on remarriage. Among them, annual income had the smallest influence but it did have statistical significance. Non-agricultural jobs significantly raise the occurrence rate of remarriage. The rate of individuals with nonagricultural jobs was 16 % ( $e^{0.15}-1 \approx 0.16$ ) higher than that of the unemployed divorced individuals. Housing conditions play an exceptionally significant positive role in remarriage. All variables denoting housing conditions had statistical significance. When the value measuring housing conditions increases by one unit, the recurrence rate of remarriage increases by 6 % ( $e^{0.06}-1 \approx 0.06$ ). The remarriage rate of individuals without housing problems is 22 % ( $e^{0.20}-1 \approx 0.22$ ) higher than the rate of those with housing problems. These results indicate the significance of housing conditions for remarriage in China.

Variables indicating gender and individual resources were added to model 2 for analysis of interaction terms in order to test whether the effects of individual resources on remarriage vary depending on gender (Table 2). The analysis shows that except for employment and income, all interactions have statistical significance. This suggests that there is a significant difference in the effects of individual resources on remarriage.

In model 3, the main effect size of employment is 0.20 ( $p < 0.05$ ), which shows that females with nonagricultural jobs have some advantages in remarrying over those without nonagricultural jobs. The remarriage rate of individuals with nonagricultural jobs is 22 % ( $e^{0.20} - 1 \approx 0.22$ ) higher than those without nonagricultural jobs. The main effect size of gender is  $-0.29$  ( $p < 0.05$ ), which indicates it is more difficult for males without nonagricultural jobs to remarry than their female counterparts. Accordingly, the remarriage occurrence rate of males without nonagricultural jobs decreases by 25 % ( $e^{-0.29} - 1 \approx -0.25$ ). The interaction of gender and nonagricultural jobs has no statistical significance, which suggests that nonagricultural jobs promote remarriage regardless of gender. The result supports hypothesis 4.

Interaction of gender and income was added to model 4. The result shows that the main effect size of gender is  $-0.53$  ( $p < 0.01$ ), which means low income exerts more negative effect on remarriage for males than for females. On average, the remarriage occurrence rate of females with a low income is 41 % ( $e^{-0.53} - 1 \approx -0.41$ ) higher than that of their male counterparts. The main effect size of income is  $-0.01$  ( $p < 0.1$ ), which reveals that income has a subtle negative effect on females' remarriage. The interaction is 0.03. Although this has no statistical significance, it indicates an apparent tendency that income has a greater positive effect on remarriage for males than for females. It can therefore be concluded that the effect of income on females' remarriage is binary. On the one hand it accelerates the

**Table 2** The ML estimation of interaction coefficient in personal resources and gender ( $N = 1033$ )

| Variable                          | Model 3      | Model 4                 | Model 5                 | Model 6       |
|-----------------------------------|--------------|-------------------------|-------------------------|---------------|
| Gender <sup>a</sup>               | -.29** (.11) | -.53** (.22)            | -1.25*** (.23)          | -.51*** (.14) |
| Work <sup>b</sup>                 | .20* (.10)   | .16** (.08)             | .16** (.08)             | .16** (.08)   |
| Log income                        | -.00 (.01)   | -.01 <sup>+</sup> (.00) | -.00 (.01)              | -.00 (.00)    |
| Housing conditions                | .06* (.03)   | .06* (.03)              | -.06* (.03)             | .06* (.03)    |
| Compulsory education <sup>c</sup> | -.16* (.09)  | -.15 (.09)              | -.12 (.09)              | -.20 (.12)    |
| Secondary education               | -.24* (.13)  | -.24** (.03)            | -.21 <sup>+</sup> (.03) | -.47** (.17)  |
| Higher education                  | -.32* (.17)  | -.29** (.17)            | -.25 (.17)              | -.82** (.26)  |
| Gender × work                     | -.08 (.14)   |                         |                         |               |
| Gender × income                   |              | .03 (.03)               |                         |               |
| Gender × compulsory education     |              |                         |                         | .11 (.17)     |
| Gender × secondary education      |              |                         |                         | .46** (.23)   |
| Gender × higher education         |              |                         |                         | .95** (.32)   |
| Gender × housing condition        |              |                         | .22*** (.05)            |               |
| Log likelihood                    | -3539        | -3539                   | -3532                   | -3535         |
| Chi-square statistic              | 320.2        | 319.6                   | 333.9                   | 333.7         |

Due to space limitations, only variables involved in the analysis of interactions are listed in the table. Other variables include registered permanent residence, region, nationality, age, family size, whether or not respondent's parents are still alive, size of social network of relatives, whether or not the respondent belongs to a clan, and whether or not they have minor children

<sup>a</sup>Means  $p < 0.1$ , \*means  $p < 0.05$ , \*\*means  $p < 0.01$ , \*\*\*means  $p < 0.001$  (two-tailed test)

<sup>b</sup>Females as the reference category. <sup>c</sup>Nonagricultural jobs as the reference category. <sup>d</sup>No formal education as the reference category

process of remarriage; on the other hand, with the increase of income individuals' dependence on remarriage decreases, thus hindering the remarriage process.

The interaction of housing and income was included in model 5. The estimate in model 5 shows that the main effect size of gender is  $-1.25$  ( $p < 0.001$ ), indicating that with controls over other variables, the remarriage rate of men with poor housing conditions is 71 % ( $e^{-1.25}-1 \approx -0.71$ ) lower than that of their female counterparts. The estimate of the main effect size of housing conditions is  $-0.06$ , indicating the improvement of housing conditions has a negative effect on women's remarriage. The negative effect mechanism can be equally explained by women's decreasing dependence on marriage and prolonged time spent looking for suitable spouses. The effect size of the interaction is  $0.22$  ( $p < 0.001$ ), which shows that improvement of housing conditions is more likely to increase the occurrence rate of men's remarriage than that of women, with the rate being 18.8 % ( $(e^{0.22}-1) + (e^{-0.06}-1) \approx 0.188$ ) higher when other variables are controlled.

The interaction of education and gender was included in model 6. The main effect size of gender is  $-1.25$  ( $p < 0.001$ ), which means the remarriage rate of men with no formal education is 40 % ( $e^{-0.51}-1 \approx -0.40$ ) lower than that of their female counterparts when other conditions are held stable. The three estimates of education are all below zero, indicating the tendency toward a declining occurrence rate of women's remarriage. Compared with the remarriage rate of women with no formal education, the rate of women who have received secondary education is 37 % ( $e^{-0.47}-1 \approx -0.37$ ) lower and the rate of those who have continued with higher education is 56 % ( $e^{-0.82}-1 \approx -0.56$ ) lower. Two of the three interactions have statistical significance, which shows there is a gender difference in the effect of education level (secondary education and higher education) on remarriage. Compared with the remarriage rate of women with no formal education, the rate of men who have received secondary education is 19 % ( $e^{0.46}-1 + e^{-0.47}-1 + e^{-0.51}-1 \approx -0.19$ ) lower and the rate of those who have pursued higher education is 7 % lower.

Except for education factors, the results from model 4 to model 6 verify hypothesis 3, that is, there is a gender difference in the effect of individual resources on remarriage. For men, a good income, desirable housing conditions, and a nonagricultural job pave the way for remarriage, whereas for women, the effects vary depending on types of resources. Except for jobs, a variable conducive to women's remarriage, all factors of individual resources have negative effects on women's remarriage.

What raises concern is that the negative effect of education on men's remarriage is rarely mentioned in previous research, although many empirical studies (Goldman et al. 1984; Yang 2007) reveal its negative effect on women's remarriage, which is also echoed in this study. This study finds that the remarriage of men who have pursued secondary and higher education undergoes a negative change when taking women who have not received formal education as a reference. This may be explained by the fact that unlike common individual resources, education is not only a resource for choosing partners, but also provides insight into one's inner disposition. As Shechtman (2005) points out, education has an impact on daily marital communication and interaction, investment in children's education, and ways to spend spare time. In other words, it lays a solid foundation for a stable marriage. Numerous empirical studies find that there is high correlation between couples' education levels, with the correlation coefficient ranging from 0.5 to 0.6 (Layard and Zabalza 1979), and this is true with remarriage as well. The higher the level of education a divorced individual

receives, the more difficult it is for them to find a spouse with a similar education background, resulting in the decrease of their remarriage rate.

**Effects of differences between urban and rural areas, minor children, and age on remarriage**

Gender difference in remarriage is detected not only in the effect of individual resources on remarriage, but also in that of factors such as rural regions or urban regions, having minor children or not, and age. Interactions of gender with the other three factors were created to test if there is a gender difference in their effect on remarriage (see Table 3).

Interaction of gender and permanent residence was included in model 7. The result shows the main effect size of gender is  $-0.76$  ( $p < 0.001$ ), which means the remarriage rate of men in rural regions is 53 % ( $e^{-0.76} - 1 \approx -0.53$ ) lower than that of their female counterparts when other variables are controlled. This indicates that in rural regions, it is more difficult for men to remarry than women. The main effect size of permanent residence is  $-0.57$  ( $p < 0.001$ ). This shows that the remarriage rate of women in urban areas is 43 % ( $e^{-0.57} - 1 \approx -0.43$ ) lower than that of women in the countryside when other variables are controlled. The coefficient estimation of interaction is  $0.77$  ( $p < 0.001$ ), which suggests that the remarriage occurrence rate of men in urban regions is 19 % ( $e^{0.77} - 1 + e^{-0.57} - 1 + e^{-0.76} - 1 \approx -0.19$ ), significantly higher than that of women in rural areas and significantly higher than women in urban areas. The result confirms hypothesis 2, which proposes that in urban areas men are more likely to remarry than women, while in rural areas men are less likely to remarry than women.

**Table 3** The ML estimation of interaction coefficients in urban and suburb areas, minor children, age, and gender ( $N = 1033$ )

| Variable   | Model 7       | Model 8        | Model 9       | Model 10                |
|--|---------------|----------------|---------------|-------------------------|
| Gender <sup>a</sup>                                | -.76*** (.12) | -.46*** (.10)  | -.35*** (.08) | -.25 (.17)              |
| Household registration <sup>b</sup>                | -.57*** (.12) | -.56** (.11)   | -.17* (.09)   | -.18* (.09)             |
| No minor children cohabit                          | 1.11*** (.24) | .64** (.32)    | 1.27*** (.24) | 1.11*** (.25)           |
| Minor children cohabit                             | 1.08*** (.09) | .97*** (.12)   | .96*** (.12)  | 1.13 *** (.09)          |
| 25–35 years old <sup>d</sup>                       | -.63*** (.07) | -.67*** (.14)  | -.63*** (.14) | -.29 (.19)              |
| 35–45 years old                                    | -.65*** (.13) | -.73 *** (.13) | -.65*** (.13) | -.32 <sup>+</sup> (.18) |
| Above 45 years old                                 | -.92*** (.16) | -1.04*** (.16) | -.96*** (.16) | -.73*** (.22)           |
| Father or mother alive <sup>e</sup>                | -.02 (.08)    | -.00 (.08)     | -.16 (.11)    | -.03 (.08)              |
| Gender × household registration                    | .77*** (.15)  |                |               |                         |
| Gender × no minor children cohabit                 |               | 1.02** (.42)   |               |                         |
| Gender × minor children cohabit                    |               | .30* (.15)     |               |                         |
| Father or mother alive × no minor children cohabit |               |                | -.92 (.73)    |                         |
| Father or mother alive × minor children cohabit    |               |                | -.35* (.16)   |                         |
| Gender × 25–35 years old                           |               |                |               | -.20 (.19)              |
| Gender × 35–45 years old                           |               |                |               | -.18 (.24)              |
| Gender × above 45 years old                        |               |                |               | .45 <sup>+</sup> (.26)  |
| Log likelihood                                     | -3969         | -3536          | -3528         | -3536                   |
| Chi-square statistic                               | 365.6         | 336.3          | 397.8         | 315.8                   |

Due to space limitations, only variables involved in the analysis of interactions are listed in the table. Other variables include region, nationality, family size, size of social network of relatives, whether or not the respondent belongs to a clan, employment, logarithm of annual income, education, housing conditions, and housing problems

<sup>a</sup>Means  $p < 0.1$ , \*means  $p < 0.05$ , \*\*means  $p < 0.01$ , \*\*\*means  $p < 0.001$  (two-tailed test)

<sup>a</sup>Females as the reference category. <sup>b</sup>Rural region as the reference category. <sup>c</sup>Having no minor children as the reference category. <sup>d</sup>Age below 25 as the reference category. <sup>e</sup>Respondent's parents are not alive as the reference category



The interaction of variables indicating gender and existence of minor children was included in model 8. The result shows the main effect size of gender is  $-0.46$  ( $p < 0.001$ ), which means the remarriage rate of men is 37 % ( $e^{-0.46} - 1 \approx -0.37$ ) lower than that of women when they have no minor children. The main effect size of the variable indicating individuals have minor children but do not live with them is  $0.64$  ( $p < 0.001$ ), showing that the remarriage rate of women who have minor children is 90 % ( $e^{0.64} - 1 \approx 0.90$ ) higher than that of women without minor children. The main effect size of the variable indicating individuals who live with minor children is  $0.96$  ( $p < 0.001$ ); this suggests that the occurrence rate of remarriage doubles when individuals live with their minor children. The remarriage rate of men with minor children is 2.3 ( $e^{1.02} - 1 + e^{0.64} - 1 + e^{-0.46} - 1 \approx 2.30$ ) times as high as that of women without children. The remarriage rate of men who live with their minor children is 1.69 times as high as that of women without minor children. The results are consistent with hypothesis 5 and hypothesis 5a.

The interaction of variables indicating the existence of minor children and whether respondent's parents are still alive was included in model 9 to explore the effect of grandparenting on remarriage. The main effect size of whether or not parents are still alive was  $-0.16$ , with no statistical significance. This shows that whether or not parents are still alive has no substantial effect on individuals' remarriage if they have no minor children. The sizes of the two main effects are  $1.27$  ( $p < 0.001$ ) and  $0.96$  ( $p < 0.001$ ), respectively, indicating that the existence of minor children has a positive effect on remarriage when grandparents are not alive. The coefficient estimation of the two interactions is below zero and that of "parents are still alive" is  $-0.35$  ( $p < 0.01$ ). These figures reveal that the fact that parents are still alive weakens the positive effect of minor children on remarriage. This result verifies hypothesis 5b.

The interaction terms of gender and age were included in model 10 in order to test if there is a gender difference in the effect of age on remarriage. The result shows that the main effect coefficient of gender is  $-0.25$  and has no statistical significance. This suggests that there is no gender difference in the effect of age on the remarriage of women younger than 25 years. The main effect sizes of the three age groups are all below zero, which indicates that age has a negative effect on women's remarriage as they grow older. Except for the effect size of the group aged 25–35, all three have statistical significance. This means that as women's age increases, the more negative the effects that age has on their remarriage. Compared with the remarriage rate of women younger than 24 years, the rate of women aged 35–45 decreases by 27 % ( $p < 0.05$ ) and that of women aged above 45 goes down by 52 %. Among the three, only the interaction of the group aged over 45 and gender has statistical significance. According to the three coefficient estimates, men's remarriage is also negatively influenced by their growing older but to a much less significant degree than women. As a special resource, age is of greater significance to women than to men. The results validate hypothesis 6.

## Conclusions

Based on the data from China Family Panel Studies (CFPS2010), this research used the Cox proportional hazards model to analyze factors affecting remarriage. It focused on the test of the influence of family factors and individual resource factors on remarriage. The main findings can be summarized as follows.

First, family factors greatly affect remarriage. Family in Chinese culture contributes to their heavy influence on marriage, regardless whether it is the first marriage. As a result, the influence of family on Chinese remarriage cannot be ignored. The analysis of data shows that the larger the size of the family, the more favorably it contributes to remarriage. A large social network of relatives and the state of belonging to a clan also have positive effects on remarriage.

Second, individual resources produce significant effects on remarriage. The advantages of a high income, a nonagricultural job, and good housing conditions are conducive to remarriage. There is a gender difference in the effect of individual resources on remarriage due to role expectations and division of labor in the household. Resources such as income and good housing conditions play a more significant role in men's remarriage than in women's remarriage, while age and education have a more significant effect on women's remarriage than on men's remarriage.

Third, education levels have a negative effect on remarriage. Education is treated as an individual resource in the hypothesis; however, in reality, it is not only an individual resource but also a factor that reflects the inner disposition, which is of great significance to the stability of marriage. It is difficult for divorced individuals with *advanced* degrees to find a spouse who shares a similar inner disposition. This difficulty intensifies in the case of women with advanced degrees.

Fourth, China's permanent residence permit system leads to the dualistic separation of urban and rural areas and thus hinders the integration of marriage markets in the two areas. The situation is aggravated by the only-child policy instigated in the 1980s, which left men facing a marriage squeeze in many areas. When these factors are interwoven, the two variables of gender and permanent residence have an interactive effect on remarriage. In rural areas, it is relatively easier for women to remarry than men, while in urban areas, it is more difficult for women to remarry than men.

Fifth, minor children have a positive effect on remarriage. Regardless of gender, the existence of minor children urges divorced individuals to find a prospective spouse and remarry so that they can raise the children together. When the divorced individual lives together with minor children, the *incentive* mechanism works better. However, grandparenting weakens the positive effect of minor children on remarriage.

### Implications

Remarriage and its influencing factors in China share similarities with those in the West, but they are different in some aspects. The Chinese permanent residence permit system, the only-child policy, family standards in the traditional culture and patrilocal residence set the stage for the uniqueness of remarriage in China. This research places remarriage in this context and reveals the independent effect of Chinese families on remarriage. It compensates for the family dimension missing in Western theory and deepens people's understanding of Chinese remarriage and its influencing factors.

It is worth considering why the influence of tradition is still significant in remarriage while it is gradually fading away in the process of high-speed industrialization. This heavy influence is also a consequence of the Chinese social system. Compared with the welfare states in the West, a sound social security system is lacking in China. Without social support, divorced individuals are thrown into difficult situations. They have no

choice but to turn to their families for help. In this sense, the lack of a social security system increases divorced individuals' dependence on their families rather than decreases it.

However, as a substitute for a social security system, the family can be a fragile resource. If the family fails to provide the divorced individual with effective security, remarriage seems to be the only option. For example, influenced by the traditional culture, the bride's family only provides her with a limited amount of security. Women with poor individual resources have to lower their standards in order to start a new marriage for financial security. Similarly, divorced individuals who are raising minor children on their own face the same dilemma. The empirical analysis in this study shows that the existence of minor children stimulates divorced individuals to remarry. In most cases, they have no other choice.

Remarriage should arise from individuals' free choice; however, it often becomes a tool for making a living due to the lack of a social security mechanism. As Guo et al. (2013) point out, it is very common for women to provide old-age care in remarriages. Without a social security system, divorced individuals are forced to trade the right of free choice in marriage for financial security. This invisible inequality can only be eliminated by improving the social security system.

## Endnotes

<sup>1</sup>Admittedly, because of their advantages in social status and resources, some people can successfully find their remarriage spouses in the first marriage market by crossing the barriers to the marriage market, but for most digamists the remarriage market is still their main choice for finding a spouse.

<sup>2</sup>There are three reasons: (1) because of female survival advantages, the number of females is larger than that of males in the middle- and old-age periods; (2) males have a much larger range of age choice in choosing a marriage mate than females; and (3) because they are less capable at housework than females, males tend to suffer more in life from the negative influence of marriage disintegration or losing a spouse.

<sup>3</sup>Some Chinese scholars believe that the influence of the traditional Chinese culture is getting weaker in the modernization process, yet it inevitably influences Chinese people's ideas and behavior regarding marriage. This is further discussed in the following analysis.

<sup>4</sup>In some cities such as Shanghai, a large number of men are involved in housework. However, due to the differences in sex roles, men and women still have different preferences when choosing a spouse.

<sup>5</sup>There is the exception that a divorced woman who is less capable and cannot find a job to support herself and her children is forced to some extent to remarry as soon as possible for financial reasons.

<sup>6</sup>Although Oppenheimer's report (1997) states that women's employment is helpful to their remarriage, the opposite conclusion has been drawn in most of the related literature in the West.

<sup>7</sup>The "status-lowering" strategy means that in the process of arriving at remarriage, a man or a woman lowers their standards in choosing a remarriage mate. For example, a young woman may marry an older man with better economic conditions.

<sup>8</sup>The data are collected from a sample of households and from all members of the families in twenty-six provinces, direct-controlled municipalities, and autonomous regions

(not including Macau and Hong Kong). The study uses implicitly stratified, multistage, and probability proportional to population size. With scientific methods of investigation and representative samples on a large scale, this yields high-quality data (Xie Yu, Hu Jingwei, Zhang Chunni, 2013).

<sup>9</sup>There are rare cases of more than one respondent in a family who has remarried; removal of the data on other respondents in the same household leads to so little loss of information that it can be ignored.

<sup>10</sup>In the married sample group, 798 were not married for the first time, among whom 771 married for the second time, 23 for the third time, 1 for the fourth time, 2 refused to respond, and 1 provided incomplete information. In the cohabitation sample group, 20 are divorced individuals in their first marriage. Some scholars point out that cohabitation is an important substitute for marriage, so this research treats cohabitation after divorce as equal to remarriage. In the divorced sample group, 408 are divorced after their first marriage, 30 after the second, and 1 after the third. Some of the 1257 samples were removed due to incomplete information, such as lack of the year of remarriage or marriage.

<sup>11</sup>In order to avoid misunderstanding, the hazard rate of remarriage is often interchangeably replaced by the occurrence rate of remarriage or remarriage rate in the research.

<sup>12</sup>The hazard period of censored samples begins with the breakdown of the marriage and ends with the completion of the survey. It is measured in months. When statistically analyzed, they are measured in years.

<sup>13</sup>Operationalization: individuals in one of the following situations are categorized as having housing problems: parents and children over 12 years share one bedroom; three generations share one bedroom; children over 12 years share one bedroom with siblings of the opposite gender; beds are set up at night and put away during the day; beds are set up in the living room.

<sup>14</sup>Family size is a variable in the household questionnaire, and includes the spouse and their children in the remarriage. They are subtracted from original data on family size to more accurately reflect the family size before remarriage.

<sup>15</sup>Due to limited space, the list of variables distribution is not provided here but can be obtained from the author upon request.

<sup>16</sup>Failure refers to the occurrence of remarriage.

#### Competing interests

The authors declare that they have no competing interests.

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