

# **China's divorce and remarriage rates: Trends and regional disparities**

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## **Abstract**

China's rapid economic growth and significant increase in divorce and remarriage rates since the early 1980s provide an excellent case for studying the divorce and remarriage patterns in economic transition. Following extremely low divorce and remarriage rates in the 1960s and 1970s, China's crude divorce rate increased from 0.33 in 1979 to 1.59 in 2007, and the percentage of remarriages among the people who married each year increased from 3.05% in 1985 to 10.24% in 2007. Our graphical and econometric analyses based on the most recently available data suggest that the variations in divorce rate and remarriage rate across regions and over time were associated with regional factors, per capita income, and education level. Also, there was a positive trend in both divorce and remarriage rates across all regions in China over the study period.

**Keywords:** China; divorce rate; remarriage rate; pooled time-series and cross-sectional data; regression analysis; economic transition

## **Introduction**

As the world's most populous country, with more than 1.3 billion people, China has experienced rapid economic growth and significant sociodemographic changes, including changes in divorce and remarriage patterns, since its market-oriented economic reform started in 1978. Following extremely low divorce and remarriage rates in the 1960s and 1970s, China's divorce rates, measured by different indicators, have increased dramatically since the late 1970s (Zeng and Wu 2000, Wang 2001, Palmer 2007). For example, China's crude divorce rate (number of divorces per 1,000 population) increased from 0.33 in 1979 to 1.59 in 2007, and its refined divorce rate (number of divorces per 1,000 married population) increased from 0.85 to 2.62 over the same

period. Similarly, the remarriage rate (percentage of remarriages among the individuals who married each year) increased from 3.05% in 1985 to 10.24% in 2007. The above divorce and remarriage rates are calculated from data published in *China Statistical Yearbook*; the dataset and calculation are available from the authors.

China's rapid economic growth and significant increase in divorce and remarriage rates provide an excellent case for identifying the factors associated with marriage, divorce, and remarriage patterns under economic transitions and for deriving policy implications. While several studies have examined the changes in China's divorce rate from the 1950s to the 1990s (Goode 1993, Platte 1988, Zeng and Wu 2000, Wang 2001), there are very limited studies on the changes in divorce rate in the past decade, especially on quantitative assessment. Several recent studies are related to marriage and divorce in China, but they focus on the impacts of divorce on children (Dong et al. 2002), marital and sexual satisfaction (Guo and Huang 2005), attitudes toward marriage and sexual behavior (Higgins et al. 2002), how women cope with divorce (Huang et al. 2004), and the development and practice of family law and divorce law (Huang 2005, Palmer 2007). This study contributes to the literature by examining China's divorce and remarriage patterns, using an econometric analysis of the most recently available data from China. To our best knowledge, this is likely the first study on China's remarriage patterns and the first quantitative analysis of China's divorce rate to be based on a large dataset. The following sections will assess the trends and regional disparities in China's divorce and remarriage rates since 1979, present an econometric analysis of China's divorce and remarriage rates, and summarize major conclusions and implications.

### **Trends and regional disparities in China's divorce and remarriage rates**

Since the People's Republic of China (PRC) was established in 1949, the country has experienced significant changes in marriage, divorce, and remarriage patterns. Whereas the available data on China's divorce rate from 1949 to 1998 are well summarized by Platte (1988) and Wang (2001), this paper assesses the changes in China's divorce and remarriage rates since 1979. Specifically, available data on the number of divorces, marriages, remarriages, total population, and percentage of married population, from *China Statistical Yearbook*, published by the National Bureau of Statistics of China (NBSC), are used to calculate China's crude divorce rate, refined divorce rate, and remarriage rate.

China's crude and refined divorce rates from 1979 to 2007, reported in Figure 1, suggest two conclusions. First, both rates have increased significantly and steadily since 1979, especially since 2002. Second, the crude divorce rate increased at a higher rate than the refined divorce rate because the percentage of China's married population among the total population increased significantly over the study period. This finding is significant because, whereas many studies and international comparisons of divorce rate are based on crude divorce rate, this paper suggests that

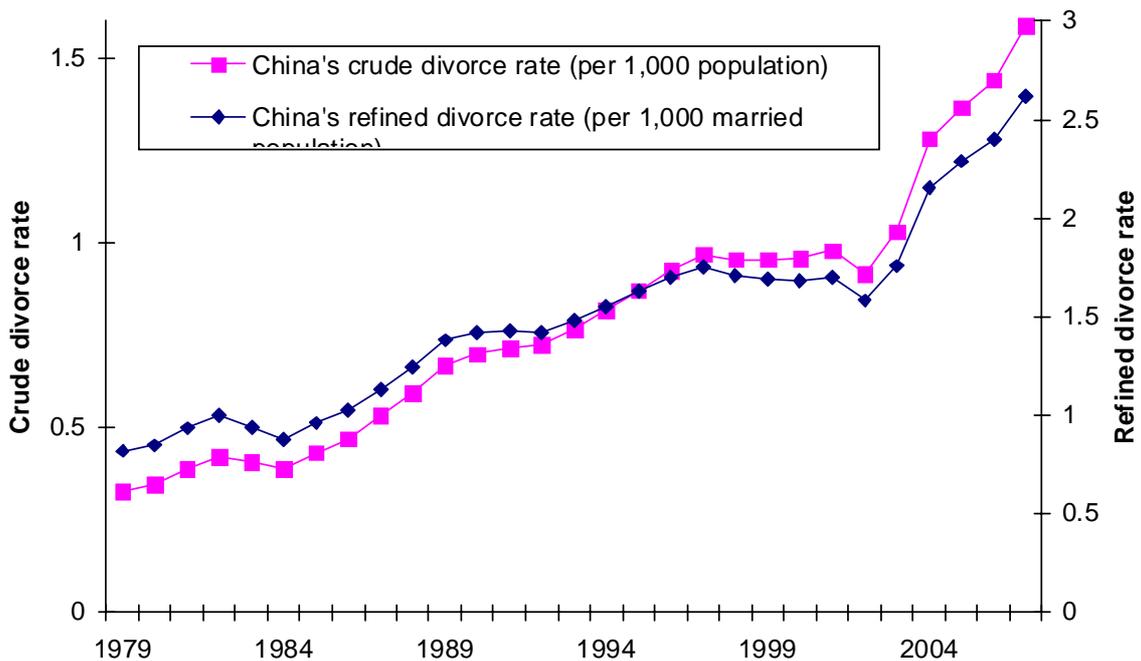


Figure 1. Trends of divorce rates in China, 1979–2007

using crude divorce rate may overestimate the increase in divorce rate in China because of the country's increasing proportion of married population. For example, from 1979 to 2007, China's crude divorce rate increased by 381.82%, but its refined divorce rate increased by only 208.24%. As reported by Wang (2009), this inconsistency between crude and refined divorce rate was not identified for the U.S. data from 1980 to 2007 because the proportion of married population in the United States remained almost unchanged during the period.

There is extremely limited information in the literature on China's remarriage rate, and this is likely the first study to assess changes in China's remarriage rate since 1985 (data for years prior to 1985 are not available). The percentage of remarriages among the individuals married each year since 1985, reported in Figure 2, suggests that China's remarriage rate has increased significantly

and steadily over the period, from 3.05% to 10.24%, or by 235.73%.

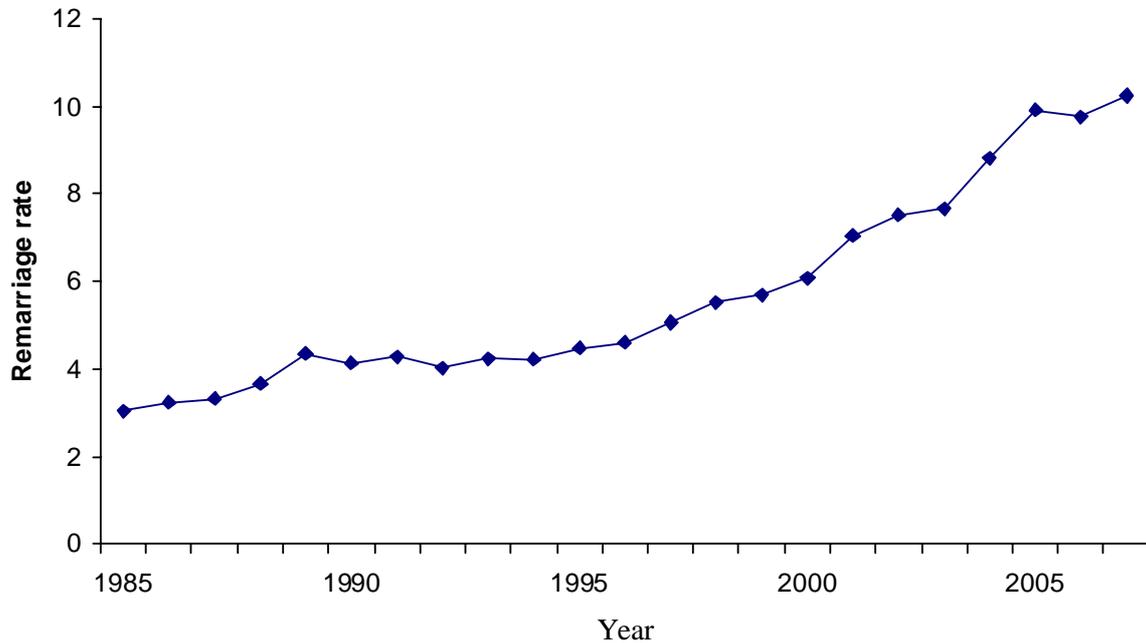


Figure 2. Trends in China's remarriage rate, 1985–2007

Because China is a huge country with significant differences in history, economic growth, culture, and population structure across regions, it is interesting to examine the regional differences in divorce and remarriage rates. Whereas Zeng and Wu (2000) reported China's crude and refined divorce rates by province-level regions in 1982 and 1990 and discussed the major factors that might contribute to the regional disparities, this study examines the regional differences in refined divorce and remarriage rates among the 31 province-level regions in China. The three-year averages for 2005 to 2007, summarized in Figure 3 and illustrated in Figures 4 and 5, suggest four major conclusions. First, there are significant regional differences in the average refined divorce rate, ranging from 0.95 in Tibet to 7.05 in Xinjiang, and in the remarriage rate, ranging from 5.79% in Guangxi to 26.45% in Xinjiang. Second, the remarriage rate and divorce rate are positively correlated for most regions, suggesting that regions with relatively higher (lower) divorce rate are likely to have higher (lower) remarriage rate. This finding seems very logical, but this is likely the first study to compare the two rates. However, there are a couple of regions with significant disparities between the two rates. For example, the remarriage rates in the three largest cities—Beijing, Shanghai, and Tianjin—and in Tibet are relatively higher than the

refined divorce rates as compared to other regions, and, on the other hand, the refined divorce rates in Chongqing, Jilin, and Heilongjiang are relatively higher than the remarriage rates as compared to other regions. Third, the divorce and remarriage rates in

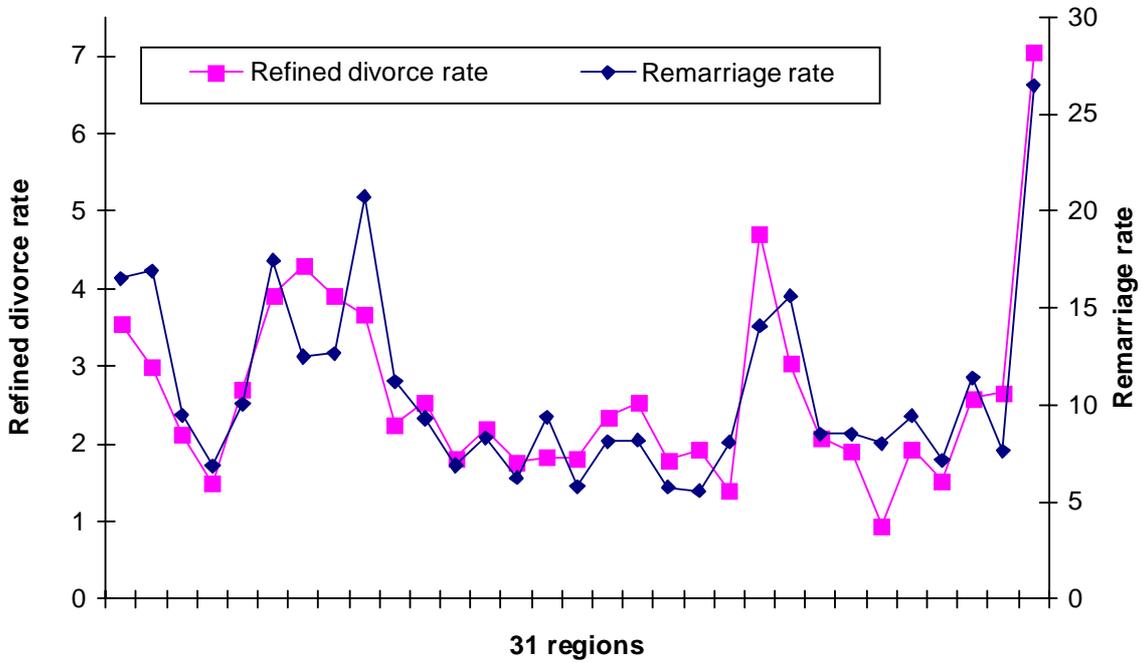


Figure 3. Three-year average refined divorce and remarriage rates by 31 regions, 2005–2007



Figure 4. Average refined divorce rate from 2005 to 2007 in China



Figure 5. Average remarriage rate from 2005 to 2007 by regions in China

Xinjiang Uygur Autonomous Region were remarkably higher than those in other regions. The extremely high rates in Xinjiang were highly related to the region's ethnic compositions, cultural tradition, and state of social development (Zhang and Huang 1996, Zeng and Wu 2000). For example, according to the 2003 population statistics, the Han population composed about 92% of China's total population but only 40.6% of the total population in Xinjiang; the other 59.4% include Uygur (about 47%) and more than 40 other ethnic minority groups (about 12.4%) (State Bureau of Statistics of China 2004). The Uygur ethnic group is defined as "Muslims and devout followers of Islam" (Zeng and Wu 2000). In the Islamic culture, divorce and remarriage are much more acceptable than in Han and other cultures in China (Hutter 1988, Zhang and Huang 1996).

### **An econometric analysis**

While the previous two sections suggest that China's divorce and remarriage rates have increased significantly since 1979 and that there are remarkable regional differences, this section presents an econometric analysis of the variations in China's divorce and remarriage rates over time and across regions, using the most recently available data from China. Specifically, this

section will describe the dataset, present the regression models, and report the empirical results.

### ***Dataset***

Data used in the econometric analysis are a pooled time-series (1996–2007) and cross-sectional (31 provincial-level regions) dataset with 371 observations compiled from *China Statistical Yearbook*. There are only 371 observations, rather than 372 (31 regions x 12 years), because Chongqing was separated from Sichuan province in 1997. The statistical yearbook has been published by the NBSC every year since the early 1980s (NBSC 1982–2008). Note that Hong Kong, Macao, and Taiwan are not included in this study. While most data used in this paper come directly from the statistical yearbooks, some data such as the percentage of married population, used to calculate the refined divorce rate, are calculated from other statistics reported in the yearbooks, such as the 0.1% population survey results. The whole dataset with calculation procedures and notes are available from the contact author.

### ***Regression model and variable definition***

Several studies have examined the changes in China’s divorce rate over time (Goode 1993, Platte 1988, Wang 2001) and across regions (Zeng and Wu 2000) and have identified some key factors behind these changes. However, almost all the studies were based on limited data, and their identification and discussion of the factors was mainly based on qualitative analysis. For example, Wang (2001) suggested that an increase in income and an improvement in education likely contributed to the increase in China’s divorce rate, but data limitations prevented the study from quantifying the exact impacts. With a large dataset of both cross-section and over-time observations, this study will estimate the following regression models:

Refined divorce rate model:

$$Y_{it} = a + b_1T_t + b_2GDP_{it} + b_3ED_{it} + \sum_{j=1}^n \gamma_j D_{jt} + e_{it} \quad (1)$$

Remarriage rate model:

$$R_{it} = c + n_1T_t + n_2GDP_{it} + n_3ED_{it} + n_4DP_{it} + \sum_{j=1}^m \lambda_j D_{jt} + v_{it} \quad (2)$$

where  $Y_{it}$  and  $R_{it}$  are the refined divorce rate and remarriage rate of region  $i$  in year  $t$ , respectively;  $T$  is a time variable in which 1996 equals 1, 1997 equals 2, and so on;  $GDP$  is the

real per capita gross domestic product (GDP), with 1990 as the base year;  $ED$  is the education level;  $DP$  is the percentage of divorced population among the population aged 15 or above;  $D$  is a set of regional variables;  $e$  and  $v$  are the error terms; and  $a, c, b, n, \gamma,$  and  $\lambda$  are the coefficients to be estimated. The time variable  $T$  is included to capture any trend across all the regions over time. The real per capita GDP is used to measure the average income, and the education level  $ED$  is measured using the percentage of population with a college or graduate degree. The regional variables included four dummy variables in the divorce rate model (Xinjiang, the Northeast region [Heilongjiang, Jilin, and Liaoning], Sichuan and Chongqing, and Tibet) and three dummy variables in the remarriage rate model (the same as above, minus Tibet). These dummy variables are included because preliminary analysis of the dataset indicates that these regions had significantly different divorce rates as compared to other regions; such differences are likely the result of population ethnics, tradition, culture, and other factors. For example, whereas the high divorce rate in Xinjiang likely correlates with the high proportion of Uygur population and Islamic culture, the low divorce rate in the Tibet Autonomous Region is related to the high proportion of Tibetan population and culture.

### ***Estimation results***

The pooled time-series and cross-section dataset with 371 observations is used to estimate the two regression models, presented in equations (1) and (2), through the ordinary least squares (OLS) procedure in SPSS. The estimation results for both models are reported in Table 1.

The estimation results for the divorce model suggest four findings. First, the estimated linear regression model fits the data very well and, as indicated by the coefficient of regression ( $R^2$ ), explained more than 84% of the variations in the dependent variable (refined divorce rate). The goodness of fit is also reflected in the high F-value of 283.71 and in all the estimated coefficients' significance at the 0.001 or 0.10 level. Second, as indicated by the coefficient of the time variable  $T$ , there was a positive and significant trend in refined divorce rate across all the regions in China over the study period, suggesting that the divorce rate increased significantly when other independent variables were held constant, over the study period. Third, both the per capita GDP and the percentage of population with a college or graduate degree had a positive and significant impact on the divorce rate. Fourth, Xinjiang had the highest divorce rate, followed by the Northeast region (Heilongjiang, Jilin, and Liaoning), Sichuan and Chongqing, and Tibet. Such

regional differences are likely associated with history, culture, population ethnics, and other unique regional characteristics.

The estimated regression model for the remarriage rate suggests four major findings. First, the estimated regression model fits the dataset very well and explained more than 82% of the variation in the dependent variable. Second, there is positive and significant trend in remarriage rates across all regions over the study period. Third, per capita GDP, education level, and the percentage of divorced population among the total population aged 15 or above contributed positively and significantly to the remarriage rate. Fourth, Xinjiang had the highest remarriage rate, followed by Sichuan and Chongqing, and the Northeast region (Heilongjiang, Jilin, and Liaoning), and such regional differences are under the condition that the time trend, per capita GDP, and percentage of population with a college or graduate degree are held constant.

Table 1. Regression results of the refined divorce rate and remarriage rate models

Independent variables	Refined divorce rate model		Remarriage rate model	
	Coefficient	T-value	Coefficient	T-value
Constant	1.1016***	19.63	0.7008***	2.16
T (time variable)	0.0237***	2.92	0.1448***	3.98
ED (% of college graduates)	8.8043***	8.49	35.0971***	7.57
GDP (per capita real GDP)	0.0884*	1.65	1.3042***	5.40
Dummy variable for the Northeast	1.6711***	20.01	2.8980***	6.76
Dummy variable for Xinjiang	4.5685***	31.90	12.0746***	14.26
Dummy variable for Sichuan	1.1153***	10.79	5.0372***	10.67
Dummy variable for Tibet	-0.5012***	-3.54		
% of divorced population			2.2316***	7.27
R <sup>2</sup>	0.8455		0.8314	
Adjusted R <sup>2</sup>	0.8425		0.8281	
F-value	283.71		255.67	
Number of observations	371		371	

\* Significant at the 0.01 level; \* Significant at the 0.10 level

### Major findings and discussion

As likely the first study on the changes in China's remarriage rate and one of the first quantitative analyses of the changes in China's divorce rate since its market-oriented economic reform started in the late 1970s, this paper first examines the trends and regional disparities in

crude divorce rate, refined divorce rate, and remarriage rate in China and then presents an econometric analysis of the factors that likely contributed to the trends and regional disparities in refined divorce and remarriage rates. Results from this study suggest three major findings and implications. First, China's divorce rate, measured by crude divorce rate and refined divorce rate, has increased significantly and steadily since 1979. A comparison of the crude and refined divorce rates indicates that using the commonly used crude divorce rate may lead to overestimation of the changes in China's divorce rate, because of the significant increase in the percentage of married population. Similarly, China's remarriage rate, measured by the percentage of remarriages among the individuals who married each year, has increased steadily and significantly over the study period. Also, there are remarkable differences in both divorce and remarriage rates across China's 31 regions, and part of the differences is likely due to regional history, tradition, population ethnics, culture, and other characteristics.

Second, although a host of factors have contributed to the variations in divorce and remarriage rates over time and across regions in China, and many of them are hard to quantify, this study confirms that it is possible through econometric analyses to identify some of the major factors and quantify their impacts on divorce and remarriage rates. Specifically, the two estimated linear regression models presented in this paper explained more than 82% of the variations in refined divorce rate and remarriage rate, and most of the estimated coefficients are significant at the 0.01 or 0.10 level. Although the estimated regression models are under some limitations, this represents one of the first quantitative studies on divorce and remarriage rates and is expected to stimulate interest in more such studies.

Third, China's divorce and remarriage rates are likely to increase at a significant rate, and their socioeconomic impacts require more attention and study. Following its steady economic growth at an average rate of more than 10% per year for the past 30 years, the Chinese economy is expected to continue to grow substantially, even under the global financial crisis. The positive association between per capita GDP and divorce and remarriage rates, identified in this study, suggests that economic growth will contribute to further increases in both divorce and remarriage rates. Also, continuing improvement in the education level of the Chinese population will contribute to higher divorce and remarriage rates, as indicated by the regression analysis presented in the previous section. Other factors that may encourage continuous growth in China's divorce

and remarriage rates include changes in family and divorce laws, that make divorce relatively easier; increasing impacts of Western culture, with more emphasis on individualism and freedom; and changing sociodemographics, such as more young couples with four or more parents to support. See Platte (1988), Zeng and Wu (2000), Wang (2001), and Palmer (2007) for more discussion about the potential impacts of such factors on China's divorce rate.

China is a large country that has experienced rapid economic growth and significant sociodemographic changes in the past three decades. The country also faces many socioeconomic trade-offs in human development policies. For example, despite a long-held tradition against divorce and remarriage, Chinese society is becoming more tolerant of divorce, in both laws and public attitudes. This may be an indication of the movement toward freedom and democracy, and against the tradition of marriages arranged by parents or for political reasons; however, the increasing divorce rate in the past three decades has caused many social problems and concerns. For example, many children are negatively affected by their parents' divorce and are left behind in education (Wang 2001). Because divorce and remarriage rates are expected to continue to increase at a significant rate, there is a great need for government agencies, communities, and nonprofit organizations to work together to establish a comprehensive support system for families and individuals, especially women and children, affected by divorce and remarriage. Collaborative efforts in data collections and research are also needed to aid understanding of marriage, divorce, and remarriage patterns under the economic transition in China and to inform policy recommendations for handling problems associated with divorce and remarriage. China's experience and lessons may also help other nations undergoing economic transition to deal with increasing divorce and remarriage rates.

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