

Empirical Analysis of Influencing Factors of Women's Marital Stability Based on Spatial Econometric Empirical Model

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Abstract: To explore the influence on the meaning in life on the relapse tendency in the compulsory isolation abstinence, used the "Chinese meaning in life Questionnaire", "The Source of meaning in life Scale" and "Relapse Tendency Questionnaire", a questionnaire survey was conducted on 156 subjects in Shaoguan Compulsory Isolation Drug Rehabilitation Center. The results showed that: (1) The level of meaning in life in drug abstinence is medium, and the level of relapse tendency is low, but there are large differences among them; in the meaning in life, they pay more attention to relationship harmony and life enjoyment. (2) The self-growth dimension of drug abstinence can significantly positively affect their sense of meaning in life, and the life enjoyment dimension can significantly negatively affect their sense of meaning in life. (3) The relapse tendency of the drug abstinence is affected by their drug use years, concern for society dimension and sense of meaning in life.

Keywords: Compulsory isolation, Drug abstinence, Meaning in life, Relapse tendency.

1. Background of the Problem

In recent years, the divorce rate in China has been climbing, with the crude divorce rate increasing from 2‰ in 2010 to 3.2‰ in 2018, and the number of registered divorces increasing from 2.678 million pairs in 2010 to 4.461 million pairs in 2018, with the number of registered divorces in China increasing by about 66.6% in the past 10 years, with an average annual growth rate of about 7%. The overall climbing trend of divorce rate has a negative impact on people's lives, which can affect not only the development of a spiritually civilized society, but even the socio-economic development of our country.

The level of divorce rate can reflect the social and economic development of a country and region to a certain extent. From the macro level, the level of divorce rate reflects the level of economic development, the level of social values, the degree of social harmony and the perfection of the marriage justice system of a country or region; from the micro level, the level of divorce rate reflects the change of family structure, the change of cultural concepts of family members and the level of divorce rate reflects changes in family structure, changes in the cultural attitudes of family members, and changes in lifestyles.

In addition, the characteristics of our large population base have led to an expanding range of people negatively affected by divorce. Our government has paid great attention to the persistently high divorce rate in recent years. In order to reduce the phenomena of impulsive divorce, "flash marriage" and "flash divorce" and to enhance the stability of marriage in society, the Civil Code of the People's Republic of China, which came into effect on January 1, 2021, added the requirement of a cooling-off period for divorce: it stipulates that both spouses must be forced separation is considered clearly before deciding whether a divorce is necessary, and the adjusted divorce procedures are: application, acceptance, cooling-off period, examination, registration (issuance of a certificate), etc.

The rising divorce rate is the result of many factors. In

order to reduce the negative impact of the rising divorce rate in China, maintain social harmony and stability, and improve social cohesion, it is of great practical significance to analyze the current situation of divorce in China and its influencing factors.

2. Literature Review

At present, there have been studies on the influencing factors of divorce rate from various perspectives. Domestic scholars' research on the factors influencing divorce rate can be divided into two categories: descriptive statistical analysis and econometric modeling analysis. Based on descriptive statistics of divorce registration data in Beijing in 2005 and 2010, Tan Yuanfa and Song Yinshu (2015) analyzed the influence of population age and gender structure on divorce rate, and concluded that there is a positive relationship between population age and gender structure and divorce rate, and men are in a strong position in marriage; Li Yutong (2018), on the basis of descriptive statistics of divorce rate changes in the past 20 years nationwide based on the increase in divorce rate.

In recent years, attributed the reasons for the increase in divorce rate to the change in the function of marriage due to economic development and social progress, the simplification of legal procedures for divorce, the reduction of social costs, the insufficient premarital relationship foundation, the increase in the demand for marriage quality, and the increase in extra-marital temptation; Zhai Zhenwu and Liu Wenli (2020), based on the statistical analysis of the census data and sample survey data from 2000 to 2017 argued that the current increase in divorce and remarriage in China is related to the influence of multiple factors such as economic and social development, the level of education of the population, and changes in the concept of marriage and family and population mobility. Scholars have conducted more econometric modeling analysis on the factors influencing divorce rates. Lin Guanjuan and Zhao Yaohui (2014) used the 1999 and 2000 Chinese census data to estimate through a linear model that mothers whose first child was a girl had a higher divorce

rate and were more likely to have sole custody of their children after divorce; Liu Beibei and Yuan Yongsheng (2016) used time series data on China's crude divorce rate, average price of commercial housing, employment rate, and educational attainment from 1995 to 2014 .

By building a vector autoregressive model with a 3rd order lag, concluded that house prices, employment rate and educational attainment have a strong influence on divorce, and predicted that China's divorce rate has a tendency to continue to rise in the next four years using a VAR model; Zhang Chong, Chen Yuxiu and Zheng Qian (2020) used provincial panel data from 2010 to 2018, and concluded through a fixed-effects model analysis that per capita GDP, the proportion of urban population , urban registered unemployment rate, sex ratio of population aged 15 and above, and housing price have a significant positive effect on divorce rate.

In contrast, foreign scholars' studies on the factors influencing divorce rates are mainly divided into two categories: comprehensive model studies and control model studies. Among them, the integrated model study of the influencing factors of divorce rate refers to that by introducing multiple influencing factors into the model and comparing each explanatory variable, the influencing factor with the most significant relationship with divorce rate is determined based on the comprehensive analysis of multiple influencing factors. Breault & Kposowa (1987) analyzed the relationship between interpersonal relationships, social harmony and divorce rate and concluded that a social environment with harmonious interpersonal relationships and convergent values has a positive effect on reducing divorce rate, and the increase of social group cohesion will contribute

to the decrease of social divorce rate; Nakonezny (1995) analyzed the level of divorce rate among the fifty states in the United States by Nakonezny (1995).

By analyzing the differences in divorce rates among 50 states in the U.S., concluded that one of the reasons for the differences in divorce rates among states in the U.S. was the different enforcement of "no-fault divorce laws", which led to the trend of studying the impact of marital justice on divorce rates. Rogers & DeBoer (2001), using panel data from 1047 married individuals, investigated the effects of higher real income of married women and the share of women's income in household income on family well-being and divorce risk, and concluded that the increase in real income of married women and the share of women's income in household income had a positive effect on divorce risk. Kendall (2011) studied the effect of Internet usage on divorce rates, controlling for demographic factors such as per capita income, unemployment rate and family size, using a sample of U.S. states, and concluded that Internet penetration has a positive relationship with divorce rates.

3. Empirical Study

3.1. Indicator System

In order to facilitate further analysis and research, the quantification of the above-mentioned types of influencing factors is explained here. Combining the relevant literature and the availability of data, this paper constructs the quantitative indicators of three social environment influencing factors and five family environment influencing factors, as shown in Table 1.

Table 1. Indicator system

Category	Name	Quantitative Metrics	Unit
Social environment factors	Real GDP per capita	Per capita nominal GDP/GDP conversion index	yuan
	Internet penetration rate	Number of netizens/population at the end of the year	%
	Urbanization rate	Urban population/year-end population	%
Family environment factors	Illiteracy rate	Illiterate population/population aged 15 and above	%
	Total social dependency ratio	Population aged 0-14 years + population aged 65 years and above	%
	Average household size	Year-end population/total number of households	people
	Years of education per capita	Number of people with little literacy	year
	Birth rate	Birth rate	‰

For each quantitative indicator in Table 1, the number of Internet users in each province comes from the Statistical Report on the Development Status of the Internet in China, which has been published annually by the China Internet Information Center since 1997, i.e., the number of Internet users in 31 provinces has been counted and published since 2004, and the report is published once a year in January and once a year in July. The Chinese Internet Center defines an Internet user as a Chinese citizen who uses the Internet for at least one hour per week on average (Li, 2014) [14]. The data of other quantitative indicators are obtained from the China Statistical Yearbook of the corresponding year.

3.2. Model Construction

With the development of economy and society, inter-regional interaction has become closer and closer, forming a community of "you have me, I have you", and the marital stability of a region is not only affected by the factors in the

region, but also by the factors in the neighboring regions. of marital stability. Since the correlation between spatial variables violates the assumption condition of mutual independence between samples in the classical econometric model, still using traditional regression analysis in this case will bring wrong conclusions. Therefore, it is important to introduce spatial effects into the traditional regression models. In this paper, we construct a spatial lagged model (SLM) and focus on the effect of each factor on the divorce rate in this model in the form of equation (2).

$$Y = \rho W_1 Y + X \beta + \varepsilon, \varepsilon \sim N(0, \sigma^2 I_n) \quad (2)$$

where $Y=(Y_1, \dots, Y_N)'$ is the explanatory variable, i.e., the crude divorce rate, which is the proportion of the number of registered divorces in that year to the average annual population in that year (expressed in thousands of points);

$X=(X_1, \dots, X_K)$ is the matrix of explanatory variables, and X mainly includes real GDP per capita, urbanization rate, Internet penetration rate, illiteracy rate, $X=(X_1, \dots, X_K)$ is the matrix of explanatory variables, X mainly includes real GDP per capita, urbanization rate, Internet penetration rate, illiteracy rate, total social dependency ratio, years of education per capita, average household size and birth rate; W_1 is the spatial weight matrix; $\beta=(\beta_1, \dots, \beta_k)'$ is the regression parameter vector of explanatory variables; ρ is the spatial autoregressive coefficient; ε denotes the random error term.

The commonly used spatial weight matrices are Rook adjacency weight matrix, which is the adjacency with only common boundary, Queen adjacency weight matrix, which includes common vertices in addition to common boundary, and geographic distance spatial weight matrix, where the distance can be set as the inverse of the center-of-mass distance $W_{ij}=1/d_{ij}$, or nonlinear distance $W_{ij}=1/d_{ij}^2$ or $W_{ij}=\exp(-d_{ij})$, or can be non-geographic distances, such as economic distance, investment distance, etc. There are various ways to set the spatial weight matrix, and the specific choice depends on the specific research problem so that the study can be practically meaningful. Given that this paper studies the correlation and heterogeneity of regional divorce rates at the provincial level, the Rook adjacency spatial weight matrix is chosen to reflect the interactions that exist

between different regions, taking into account the principle of administrative division.

3.3. Spatial Autocorrelation Analysis of Divorce Rates in China

In this paper, Moran's I index and Moran's scatter plot are used to analyze the global and local spatial correlations of divorce rates in each province of China, respectively. The global spatial aggregation effects of divorce rates by province are shown in Table 2. As can be seen from the table, the Moran's indices of divorce rates in China are all significant and greater than 0, indicating that there is a significant positive spatial correlation among divorce rates in all provinces of China, which also implies that the inter-regional correlation needs to be fully considered in the study of divorce rates in China, i.e., the spatial influence factors of the explanatory variables need to be incorporated into the traditional econometric model.

Since the global Moran's I index only reflects the overall agglomeration characteristics at the national level, it cannot reveal the variability existing between regions, but the differences in regional economic development status, population distribution, customary perceptions and regional characteristics make it obvious that there is heterogeneity between regions.

Table 2. Global Moran's I index of divorce rate by provinces and regions in China, 2009-2020

year	Moran's I	p-value	year	Moran's I	p-value
2009	0.402***	0.000	2015	0.416***	0.000
2010	0.417***	0.000	2016	0.425***	0.000
2011	0.428***	0.000	2017	0.437***	0.000
2012	0.436***	0.000	2018	0.447***	0.000
2013	0.567***	0.000	2019	0.547***	0.000
2014	0.579***	0.000	2020	0.461***	0.000

3.4. Spatial Regression of Divorce Rate in China

The results of spatial autocorrelation analysis show that the divorce rates of different provinces in China are spatially correlated. Therefore, we can further construct a spatial

regression model to study the spatial characteristics of the divorce rate, which is the formula (2) discussed above. For the estimation of spatial econometric model, the result of estimation using ordinary least squares method is biased. Therefore, the model is estimated by using the maximum likelihood estimation or the generalized method of moments.

Table 3. SLM model estimates

Variables	Estimate	The value of the t statistic	P-value
lnGDP	-0.498	-4.47	0.000
lnUrbanization rate	0.687	4.70	0.000
lnInternet penetration rate	0.246	3.47	0.000
lnIlliteracy rate	-0.075	-2.1	0.014
Ln Total social dependency ratio	0.345	1.98	0.074
lnAverage household size	-0.087	-0.29	0.687
lneducation capita	0.145	2.18	0.678
lnBirth rate	-0.026	-0.24	0.032
Number of samples		369	

The explanatory variables include divorce rate, real GDP per capita, urbanization rate, Internet penetration rate, illiteracy rate, social dependency ratio, average household size, per capita years of education and birth rate. Combining AIC and BIC criteria and other test statistics of the model, this paper chooses to construct SLM model to estimate the parameters, which is also the reason why other spatial

regression models are not considered in the previous model design. The model estimation results are shown in Table 3.

4. Conclusions and Recommendations

First, pay close attention to the issue of marital stability and formulate marriage policies according to regional differences. The findings of this paper show that divorce rates are

heterogeneous in spatial distribution, so government departments should pay close attention to the clustering status of divorce rates in each region, take into full consideration the development status, customs, and regional characteristics of the region, and formulate practical policies to improve the stability of marriage.

Second, more care and welfare should be given to the elderly group to ease the pressure of family support. The results of this paper show that the total social dependency ratio has a significant negative impact on marital stability in China. Therefore, government departments should improve the corresponding social security system to reduce the total dependency pressure on young families, especially the child support and elderly support problems faced by one-child families, so as to avoid marital instability caused by the high total social dependency ratio to a certain extent.

Third, the regulation and management of social networking platforms should be strengthened to guide the correct values. Research results show that the divorce rate is positively correlated with the Internet penetration rate. With the popularity of the Internet, the number of Internet users has increased rapidly and various marriage-related information, marriage intermediary platforms and heterosexual online social platforms have emerged through Internet channels, which have changed the information structure and lifestyle of

the public and thus have an impact on marital stability.

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