The Willingness to Settle of China's Migrant Population from a Micro Perspective

An Empirical Analysis Based on China Migrants Dynamic Survey 2017

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Abstract

This paper analyzes the factors influencing the willingness to stay of Chinese urban and rural migrant populations based on the 2017 China Migrants Dynamic Survey data using a disorderly multicategorical regression model. The empirical results show that the mobility range of the migrant population, the economic level of their hometowns and the cost of housing in the inflow area significantly affect the residence intention of the migrant population in the inflow area; the migrant population with stable occupations and high education levels have a stronger residence intention in the inflow area; the migrant population with contracted land and residential bases have a lower residence intention and are more inclined to return to their hometowns to live.

Keywords*-migrant population; settle willingness; social integration; disorderly multicategorical regression model*

1. INTRODUCTION

The migrant population refers to those who leave the county, city or municipal district where they are registered and live elsewhere for the purpose of working and living. With the accelerated industrialization and urbanization in China, there has been a long-term population movement due to the "push" and "pull" of the increase in the total supply of rural labor and the rising demand for urban labor [1]. At the same time, the "siphon effect" caused by the imbalance of regional development has also prompted a large number of inland urban residents to move to economically developed areas. Since the release and implementation of the China New-type Urbanisation Plan (2014-2020), the orderly promotion of population citizenship has become an important policy objective. By 2021, the migrant population in China has reached 233.5 million, accounting for 18% of the total population of the country [2].

Population urbanization is an important manifestation of urbanization, and the willingness of the migrant population to settle in China is closely related to the urban-rural development planning and the reform of the dual urban-rural household registration system, which directly affects the social integration of the migrant population in the inflow area and has a long-term and far-reaching impact on the regional economic development.

2. LITERATURE REVIEW

Current research on the factors affecting the settlement of the migrant population has been well established. Zhang Lijie and Liang Yuzhu et al. (2019) argue that the support of "education", the degree of self-acceptance and the sense of social integration of the migrant population are important factors influencing their settlement[3]; Hou Yu (2017) argues that individual factors, family factors, property factors and social integration factors are factors influencing the new generation of migrant population's urban settlement choice[4]; a large number of empirical studies have confirmed that economic factors are important factors influencing migrant populations' settlement, including economic income level, employment opportunities, and per capita income [5-6]. In addition, a number of studies

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have been conducted from the perspectives of social institutions and psychosocial factors [7-8]. Liu Tao, Chen Sichuang et al. (2019) analyzed the economic level and the psychosocial level, and concluded that economic income security, urban public services, individual life course differences, and hukou stay and go are important factors influencing migrant populations to settle down[9] .

In terms of analysis methods, Qiu Hong and Zhou Wenjian (2019) analyzed the willingness of the migrant population to settle down and the influencing factors through a binary logistic model[10]. Based on the analytical framework of the new labor force theory, Zhu Ping (2020) explored the willingness of the agricultural transfer population to settle in households using a disordered multicategorical logistic regression model, focusing on relevant factors from the perspective of the rational behavior principle and the relative deprivation hypothesis [11]. Zhang Xin (2018) constructed two benchmark models through binary logistic to comprehensively consider the residence decision, willingness to settle and social integration of the migrant population[12]. Based on the differential settlement policy, Wang Chengli and Wang Hongna (2020) analyzed the settlement intention of migrant population with long-term residence intention in cities of different sizes using the data from china migrants dynamic survey using a binary logistic model[13].

At present, some literature has been based on the CMDS and using binary logistic models to estimate the influencing factors of the willingness to stay of the migrant population. However, in the CMDS questionnaire, the questionnaire question that assesses the factors of residence of the migrant population is not a standard dummy variable but a trichotomous variable, and the results obtained by using a binary model estimating the dummy variable may not be robust. Meanwhile, some of the studies omitted some key variables, such as the ownership of property rights of the migrant population and the economic level of their hometown, which can significantly affect the willingness of the migrant population to stay in the inflow area. Based on the 2017 CMDS data, this paper uses a disordered multicategorical model suitable for categorical data to filter variables from the personal characteristics, economic factors, employment and mobility of the migrant population to analyze the influencing factors of the migrant population's willingness to settle down.

3. RESEARCH METHODOLOGY

3.1. Data Sources

The data used in this paper are the data from the 2017 China Migrants Dynamic Survey by the China Health and Health Commission. The survey covers 31 provinces (municipalities and autonomous regions) in China, and the selected sample is the migrant population who have stayed in the local area for more than one month. The project uses a stratified, multi-stage, large-scale PPS sampling method to conduct a dynamic monitoring survey on the development of China's migrant population with a sample size of 169,989.

3.2. Unordered Multicategorical Logistic Regression

3.2.1. Variable Selection

In this paper, whether the migrant population has the intention to settle down or not is taken as the dependent variable. Since the questionnaire is designed as a three-category variable ("no intention to settle down", "uncertain" and "intention to settle down"), "uncertain" in the explanatory variable is taken as the reference group, and the independent variables are selected from four aspects: individual characteristics of the migrant population, economic factors, employment situation and property factors.

In terms of individual characteristics of migrant population, this paper selects gender (GENDER), household registration nature (HUKOU), political appearance (PA), education level (EDU), marital status (MARRY), and mobility range (SCOPE) of the migrant population to reflect. Economic factors are important influencing factors for the migrant population to choose the inflow place and consider whether to settle down or not. In this study, average monthly expenditure (AME) and housing expenditure (AMHE), monthly income (MI), whether to buy a house (HOUSE), and whether to have contracted land (CL) and home base (HB) were selected as independent variables. Employment is an important measure of the ability of the migrant population to integrate in the inflow city, and is reflected by the variables of whether they are employed (EMPLOEY), their current main occupation (CONTRUCT), and the nature of their occupation (WORK). In terms of property factors, the impact on the willingness of the migrant population to settle is analyzed through the location of household registration (HR), the number of mobile cities (CITY), and whether they continue to live and work locally (STAY).

3.2.2. Data Analysis Method

In order to further verify the specific influences of the selected independent variables on the willingness of the migrant population to settle down, this study introduces a disordered multicategorical logistic regression model in the empirical analysis (The explanatory variable is the willingness of the migrant population to settle down, which is divided into three options: no willingness to

settle down, uncertain and willing to settle down). The regression model in this paper is as follows.

$$L_n\left[\frac{p(y=j|x)}{p(y=j|x)}\right]=a_j+\sum_{k=1}^{k}\beta_{jk}x_k \tag{1}$$

For any choice of willingness to settle among the migrant population, j = 0, 1, 2. where P(Yi=j) denotes the probability of the migrant population for the j^{th} choice, X_k denotes the k^{th} independent variable affecting the willingness of the mobile population to settle, and the explanatory variables are four types of variable factors, namely characteristics factors, economic factors, employment factors and residence factors, β_{jk} denoting the vector of regression coefficients of the independent variables.

Using J as the reference type, the ratio of the probability of the mobile population choosing other settlement intentions to the probability of choosing J is the event ratio, $\frac{P(y=j|x)}{P(y=J|x)}$ i.e. the OR value. Therefore, in this paper, the following 2 logistic models are chosen with uncertain willingness as the reference class.

Model 1: No intention to settle (reference group=not sure);

$$L_n\left(\frac{p_0}{p_1}\right)=\partial_0+\sum_{k=1}^{k}\beta_{0k}x_k \tag{2}$$

Model 2: Willingness to settle (reference group=not sure);

$$L_n\left(\frac{p_2}{p_1}\right)=\partial_2+\sum_{k=1}^{k}\beta_{2k}x_k \tag{3}$$

Where p_0, p_1 and p_2 indicate the probability of choosing no intention to settle, uncertain intention to settle and intention to settle, respectively.

3.2.3. Likelihood Ratio Test

As can be seen from Table 2, the likelihood ratio test for the model developed was less than 0.05 and the model could explain the correlation between the variables very well.

TABLE 1. LIKELIHOOD RATIO TEST

Model	Model Fitting Criteria	Likelihood ratio test		
	-2 times the log-likelihood value	χ^2	*df*	*Sig.*
Cut-off distance only	267643.339			
Final	243866.708	23776.6	40	0.000

3.2.4. Results and Analysis

In the analysis of the results, we took into account the results where the sig test value reached 0.05 and the regression coefficients of the two regression equations were opposite.

TABLE 2. MULTI CATEGORY LOGISTIC REGRESSION (MODEL 1)

Variable	B	S.E,	Wals	df	sig	Exp(B)
GENDER						
[GENDER=0]	0.046	0.013	12.215	1	0.000	0.955
[GENDER=1]	0b	.	.	0	.	
HUKOU	0.061	0.025	5.905	1	0.015	0.941
QUAN	0.063	0.018	12.918	1	0.000	1.065
EDU	0.214	0.015	209.621	1	0.000	0.807
PA	0.021	0.014	2.133	1	0.144	1.021
MARRY	0.098	0.01	90.821	1	0.000	1.103
SCOPE	-0.72	0.013	30.156	1	0.000	0.930
AMHE	0.157	0.011	213.344	1	0.000	0.855
AME	0.071	0.01	51.106	1	0.000	1.074
AMHHI	0.026	0.009	8.585	1	0.003	1.027
CL	0.202	0.014	204.44	1	0.000	1.224
HB	0.054	0.014	14.698	1	0.000	1.056
EMPLOEY	-0.002	0.037	0.004	1	0.951	0.998
CONTRUCT	-0.016	0.01	2.439	1	0.118	0.984
WORK	0.065	0.009	49.275	1	0.000	1.067
HR	-0.106	0.015	47.14	1	0.000	0.899
CITY	0.055	0.006	71.689	1	0.000	1.056
HOUSE	-0.123	0.016	58.589	1	0.000	0.884
STAY	0.208	0.015	197.383	1	0.000	1.231
HOSPITAL	0.066	0.014	21.704	1	0.000	0.936

TABLE 3. MULTI CATEGORY LOGISTIC REGRESSION (MODEL 2)

Variable	B	S.E	Wals	df	Sig.	Exp(B)
GENDER						
[GENDER=0]	-0.020	0.013	2.265	1	0.132	0.980
[GENDER=1]	0b	.	.	0	.	
HUKOU	-0.012	0.024	0.274	1	0.601	1.012
QUAN	0.039	0.018	4.778	1	0.029	1.040
EDU	0.024	0.015	2.436	1	0.119	1.024
PA	-0.001	0.014	0.002	1	0.967	0.999
MARRY	0.011	0.010	1.162	1	0.281	1.011
SCOPE	0.246	0.013	345.606	1	0.000	1.279
AMHE	-0.016	0.010	2.365	1	0.124	1.016
AME	0.144	0.010	208.188	1	0.000	1.155
AMHHI	0.032	0.009	12.607	1	0.000	1.033
CL	-0.115	0.014	62.936	1	0.000	0.892
HB	-0.203	0.014	207.029	1	0.000	0.816
EMPLOEY	-0.016	0.037	0.180	1	0.672	0.984
CONTRUCT	0.056	0.010	29.354	1	0.000	1.058
WORK	-0.083	0.009	78.287	1	0.000	0.921
HR	-0.076	0.015	27.182	1	0.000	0.927
CITY	-0.017	0.008	4,796	1	0.029	0.984
HOUSE	-0.040	0.016	6.413	1	0.011	0.961
STAY	2.034	0.021	8988.810	1	0.000	7.648
HOSPITAL	0.069	0.014	23.907	1	0.000	1.071

Analyzed from the perspective of individual characteristics of the migrant population, there are significant effects of household registration (HUKOU), and educational attainment (EDU) on their willingness to settle in the inflow area. The willingness to settle down is relatively low for mobile groups with resident hukou. The mobile group is disadvantaged in terms of the level of social security they enjoy in housing, education, and medical care, etc. Resident hukou has a higher level of social development compared to the non-resident hukou domicile, and the sunk cost of settling is high. Highly educated groups have a relatively high willingness to settle down. The migrant population with higher education is more flexible in social adaptation and social integration, and has more advantages in employment. In contrast, those with low education are more difficult to adapt to the inflow.

In terms of property rights, there is a significant effect of housing expenditure (AMHCOST), contracted land (CONTLAND) or home base (HOMESTEAD) ownership on the willingness to settle down. The greater the housing expenditure in the inflow place, the higher the propensity of the migrant population to choose no intention to settle down. The migrant population with contracted land or home base is more inclined to choose not to settle down.

In terms of employment, the type of occupation (EMPLOEY) and the nature of occupation (CONTRUCT) of the migrant population have a significant effect on their choice of willingness to settle down. Those who are not employed, have no fixed occupation and are engaged in production category are more inclined to uncertainty in their willingness to settle down. In terms of job security, workers in the production category or without fixed occupation have strong substitutability of their individual occupational skills, lower and unstable income, and therefore have lower willingness to settle down. In contrast, groups with higher incomes or stable jobs have a stronger willingness to settle down. Self-employed workers have a lower willingness to settle down, and mobile workers with employee status have a higher willingness to settle down. Stable employment relationship and wage income have a greater influence on the decision of migrant population to settle down.

In terms of property factors, the number of cities (CITY) in which the migrant population moves, and the range of mobility (SCOPE) have a significant impact on their choice of willingness to settle down. The specific differences are: the more mobile people with more number of mobile cities, the lower their willingness to settle down. Frequent mobility reduces the sense of local belonging, is not conducive to the cultivation of social networks, and has a low level of social integration. For groups with a small number of mobile cities, as local symbols gradually penetrate into daily life, a sense of local belonging gradually develops and the willingness to settle increases. Similarly, cross-provincial mobile groups have less interaction with their hometowns than provincial mobile groups, and are more likely to form a

sense of local belonging in the inflow area and have a higher willingness to settle in the inflow area.

4. Conclusions and Recommendations

This paper analyzes the factors influencing the willingness to stay of China's urban and rural migrant population based on the 2017 China Migrants Dynamic Survey using a disorderly multicategorical regression model. The empirical results show that the mobility range, education level, and occupational stability of the migrant population are positively related to the willingness to settle. The larger the mobility range, the stronger the combined force of the pull force of the inflowing place and the push force of the outflowing place, and the stronger the willingness to settle down. The higher the education level, the stronger the work skills and property accumulation ability, and the higher the willingness to settle down. Stable employment relationship and high income have a significant positive effect on increasing the willingness to settle down. Housing expense is an indicator that affects the willingness of migrant population to settle down; the higher the housing expense, the lower the willingness to settle down; the mobile group has contracted land and home base to settle down these economic resources, settling down means the loss of material resources for the family, thus has a negative effect on the willingness to settle down. In addition, as the number of mobile cities increases, the willingness of the migrant population to settle down will decrease.

To sum up, this paper proposes the following suggestions to improve the willingness of the migrant population to settle in the inflowing cities.

A. Deepen the reform of the household registration system, improve the withdrawal mechanism and paid transfer mechanism of rural residential bases, and realize "people-oriented" deep urbanization. While trying to break the restrictions of the dual household registration system, the legal rights and interests of agricultural households should be guaranteed, and residents and non-residents should be treated equally and share urban resources equally.

B. Romote the continuing education of the migrant population and solve the institutional obstacles to the education of their children. Strengthen the protection of labor rights and interests, and pay attention to the employment of the population. Enhance the economic vitality of cities and towns, create jobs, improve the employment environment of the migrant population, provide them with stable and predictable economic income, guarantee the necessary material basis for their urban life, and effectively improve their ability to settle in cities.

C. Provide public and low-cost housing, reduce housing expenses, improve housing distribution, and maintain stable housing prices. Only by "living in peace" can we "work in happiness", and only then can the migrant population fundamentally escape from the state of "semi-urbanization".

References

[1] National Health Commission. China Mobile Development Report 2018 [M]. Beijing: China National Publishing House, 2018.

[2] Wang Chunguang. Relationship between Social Identity and Urban and Rural Integration of Cenozoic Rural Migrant Population [J]. Sociological Research, 2001 (03): 63-76.

[3] Zhang Lijie. Liang Yugui. Sun Chenchen. Chen Mengqian. Analysis on the influencing factors of the floating population's willingness to settle down in China [J]. Journal of science and technology economy, 2019 (18): 210-211.

[4] Hou Yu. Research on the status quo and influencing factors of the new generation of floating population's willingness to settle in cities -- Based on the dynamic monitoring data of floating population of the national health and Family Planning Commission in 2010 and 2014 [D]. Shandong University, 2017.

[5] Chan K W, Buckingham W. Is China Abolishing the Hukou System?[J]. China Quarterly, 2008, 195(195).

[6] Bertoli S, Moraga F H, Ortega F. Immigration Policies and the Ecuadorian Exodus[J]. The World Bank Economic Review, 2010, 25(1):57-76.

[7] Karemera D, Oguledo V I, Davis B. A gravity model analysis of international migration to North America[J]. Applied Economics, 2000, 32(13):1745-1755.

[8] Jaeger D A, Bonin H, Dohmen T, et al. Direct Evidence on Risk Attitudes and Migration[J]. Working Papers, 2007, 92(3):684-689.

[9] Liu Tao. Chen Sichuang. Cao Guangzhong. The willingness of floating population to stay and settle down and its influencing factors [J]. China Population Science, 2019 (03): 80-91 + 127-128.

[10] Qiu Hong, Zhou Huijian. Analysis on the settlement intention and influencing factors of floating population [J]. Journal of population, 2019 (5): 91-100.

[11] Zhu Ping. The settlement intention of stable resident agricultural transfer population under the background of "new household reform" [J]. Nandu xuetan, 2020 (6): 100-106.

[12] Zhang Xin, Zhou Shaojie, Yao Jinwei. Residence decision, settlement intention and social integration [J]. Journal of humanities, 2018 (4): 39-48.

[13] Wang Chengli, Wang Hongna. Settlement willingness and influencing factors of urban long-term resident population [J]. Journal of Central South University of economics and law, 2020 (5): 64-72.