

Relationship Between Population Mobility and Economic and Social Development in China's Northeast Border Region

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ABSTRACT

In order to study the relationship between population mobility and economic and social development in China's northeast border region, a detailed investigation on the economic and social development and population mobility in this area was carried out. Also, the impact of population mobility on the economy and society in China's northeast border region was analyzed. It is pointed out that population mobility not only causes the imbalance of population age and gender structure and the loss of human capital, but also promotes the economic and social development in northeast border region. Based on the summary of the relationship between population mobility and economic and social development, this work put forward countermeasures and suggestions to promote the coordinated development of economy, society and population in northeast border region.

Keywords: *Northeast China; Border region; population mobility; Economic and social development*

1. INTRODUCTION

Population mobility has a certain impact on regional economic and social development, and has been widely concerned. At present, researchers mainly focus on the impact of population mobility on the destination of population, such as the social integration of floating population, the education of floating children, and the economic and social impact of population mobility on cities and towns [1-3].

The research on the relationship between population mobility and economic and social development in China's northeast border region is relatively scarce, and most of them take some regions as examples [3,4]. In this work, the whole northeast border region is taken as a whole for systematic analysis, and the concept of "mobility ratio" is introduced. The research results are more representative and convincing.

2. THE CURRENT SITUATION OF ECONOMIC AND SOCIAL DEVELOPMENT IN CHINA'S NORTHEAST BORDER REGION

There are 33 border counties and cities in China's northeast border region, as shown in Table 1, and there are great differences in economic development among counties and cities. With regard to the GDP among the counties and cities, Donggang City, Muling City of Mudanjiang City and Fusong County of Baishan City in Liaoning Province

rank among the top three border counties and cities in Northeast region. The GDP of these three counties and cities was 56.905 billion yuan, accounting for a quarter of the total GDP of all the counties, cities and districts in northeast region. Tahe County, Sunwu County and Huma County in Heilongjiang Province were ranked last, with a total GDP of 4.539 billion yuan, accounting for 1.96% of the total GDP of all northeast border counties and cities. Donggang's regional GDP is 18.3 times that of Huma county. Such a huge difference reflects the uneven development of northeast border counties and cities.

In terms of per capita GDP, Suifenhe City, Aihui District and Dongning City rank in the top three. The per capita GDP of Suifenhe City is more than 210000 yuan, far exceeding other counties and cities. The per capita GDP of Aihui District and Dongning City is more than 70000 yuan. However, the per capita GDP of Sunwu County and Huma County is relatively low. The per capita GDP of these two counties and cities is 14670 yuan and 14589 yuan respectively. There is also a big difference in this index between regions. The per capita GDP of Suifenhe City and Sunwu County is more than 14 times.

Accordingly, it can be seen that establishing foreign trade ports is of great significance to regional economic development. The port cities represented by Donggang, Suifenhe, Dongning, etc., have better economic conditions, and the secondary and tertiary industries are more developed. As the growth pole of regional development, it promotes the economic development of the northeast border region. However, the primary industry is still the main part of the economy due to the backward secondary and tertiary industries in the remote and closed areas, resulting in the slow development of the region and the

gradual expansion of the gap with the fast-growing counties and cities.

Table 1 Economic development in China's northeast border region (2018)

Provinces	Prefectural level cities	Counties (cities)	Gross regional product (billion yuan)	GDP per capita (yuan)
Liaoning Province	Dandong City	Zhenan District	73.25	28754
		Yuanbao District	60.20	33503
		Zhenxing District	127.68	29553
		Kuandian County	85.99	20597
		Donggang City	240.35	40758
Jilin Province	Tonghua City	Jian City	77.47	36596
	Baishan City	Hunjiang District	52.31	38745
		Fusong County	152.93	54187
		Changbai County	45.41	58244
		Linjiang City	86.79	56266
	Yanbian Korean Autonomous Prefecture	Tumen City	23.22	21028
		Hunchun City	93.70	41015
		Longjing City	27.87	18093
		Helong City	48.98	29195
	Heilongjiang Province	Jixi City	Antu County	51.23
Jidong County			84.94	31377
Hulin City			72.96	26498
Hegang City		Mishan City	101.65	25636
		Luobei County	42.01	19633
Shuangyashan City		Suibin County	28.39	16125
		Raohe County	22.97	16517
Yichun City		Jiayin County	21.16	30059
Jiamusi City		Fuyuan County	37.78	45285
		Tongjiang City	47.33	26967
Mudanjiang City		Dongning City	147.31	72575
		Suifenhe City	147.92	212513
		Mullen City	175.77	64783
Heihe City		Aihui District	31.23	75632
		Xunke County	26.62	27882
		Sunwu County	13.58	14670
Tai Hing Ling Area		Huma County	13.13	14589
	Take County	18.68	25556	
	Mohe County	29.29	41520	

Data source: China County Statistical Yearbook in 2018

3. POPULATION MOBILITY IN CHINA'S NORTHEAST BORDER REGION

According to Table 2, the total population of northeast border counties and cities in 2018 was 6,844,700, with an average population of 207,400. There are 15 counties and cities with higher than average population. Donggang City in Liaoning Province has a population of 589,700, accounting for 8.62% of the total population. Donggang is the most populous county (city) in the northeast border region. The total population of the top 10 counties (cities) with the largest population reaches 3.5744 million, accounting for 52.22% of the total population. Suifenhe

City in Heilongjiang Province has the smallest population, with only 69,600 people, accounting for 1% of the total population in the northeast border region. The 10 counties (cities) with the least population have a total population of 882600, accounting for 12.89% of the total population. The population is not evenly distributed among counties and cities, and more people gather in areas with higher economic development level.

Table 2 Population of northeast border counties and cities Unit: 10,000 (2018)

Counties (cities)	Population	Counties (cities)	Population	Counties (cities)	Population
Zhenan District	16.84	Hunchun City	22.85	Fuyuan County	8.34
Yuanbao District	17.97	Longjing City	15.40	Tongjiang City	17.55
Zhenxing District	43.20	Helong City	16.78	Dongning City	20.30
Kuandian County	41.75	Antu County	19.75	Suifenhe City	6.96
Donggang City	58.97	Jidong County	27.07	Mullen City	27.13
Jian City	21.17	Hulin City	27.53	Aihui District	18.41
Hunjiang District	32.63	Mishan City	39.65	Xunke County	9.55
Fusong County	28.22	Luobei County	21.40	Sunwu County	9.26
Changbai County	7.80	Suibin County	17.60	Huma County	28.62
Linjiang City	15.42	Raohe County	13.91	Take County	7.31
Tumen City	11.04	Jiayin County	7.04	Mohe County	7.05

With the increasing scale of floating population, the influence of floating population on the total population of a region cannot be ignored. Therefore, an index such as "mobility ratio" is constructed to measure the intensity of population mobility in the region. The "mobility ratio" is the ratio between the registered population and the permanent population in a region. The high mobility ratio indicates that the number of registered population is larger than that of the permanent population, and the intensity of outflow is greater than that of population inflow. The low flow ratio indicates that the number of registered permanent residence population is smaller than that of the permanent population, and the intensity of population inflow is greater than that of population outflow. Population inflow is mainly caused by population inflow. Table 3 shows that the population mobility ratio of 15 counties (cities) in 33 border counties (cities) is larger than 100%, indicating that the population of registered residence in these counties is larger than that in permanent residents. Among them, Changbai Korean Autonomous County, Jiayin County and Kuandian Manchu Autonomous County have the highest mobility ratios. Taking Changbai Korean Autonomous County as an example, the population mobility ratio of this county is 117.24% (i.e., the permanent population is about 8.5

percent of the registered population), indicating that the outflow of population in this county is greater than the inflow of population in other regions. In the other 18 counties and cities, the population mobility ratio is less than 100%, which means that the permanent population of these counties and cities exceeds the registered population. The Suifenhe City, Fuyuan County and Hunjiang District had the lowest mobility ratio. Among them, the mobility ratio of Suifenhe City is 50.34% (i.e., the registered population only accounts for half of the permanent population), indicating that a large number of people from other regions have been flowing into Suifenhe City. There is a close relationship between population mobility and the level of regional economic and social development. When a region has a higher level of economic development, a more perfect social public service system, more employment opportunities and higher wage level, people from surrounding areas can be attracted to live or work, and the population will increase. On the contrary, if a region has a low level of economic development, fewer employment opportunities, low wages, backward public service conditions, and it is difficult to meet the material and cultural needs of local residents, it will promote the original residents to go to other areas, and the local population will be reduced.

Table 3 Population mobility in northeast border counties and cities Unit: %

Counties (cities)	Mobility ratio	Counties (cities)	Mobility ratio	Counties (cities)	Mobility ratio
Zhenan District	96.28	Hunchun City	92.16	Fuyuan County	69.52
Yuanbao District	90.23	Longjing City	104.12	Tongjiang City	95.33
Zhenxing District	91.32	Helong City	105.26	Dongning City	107.78
Kuandian County	110.23	Antu County	93.76	Suifenhe City	50.34
Donggang City	94.33	Jidong County	108.25	Mullen City	103.54
Jian City	97.62	Hulin City	91.75	Aihui District	89.96
Hunjiang District	87.69	Mishan City	106.75	Xunke County	101.98
Fusong County	105.72	Luobei County	105.24	Sunwu County	94.52
Changbai County	117.24	Suibin County	92.25	Huma County	98.33
Linjiang City	101.23	Raohe County	107.33	Take County	96.54
Tumen City	94.38	Jiayin County	113.41	Mohe County	102.65

4. THE RELATIONSHIP BETWEEN ECONOMIC AND SOCIAL CONDITIONS AND POPULATION MOBILITY IN CHINA'S NORTHEAST BORDER REGION

Population mobility has promoted the rapid economic and social development of the northeast border area, but also brought some potential negative effects to this area [5]. Only by correctly understanding and evaluating the impact of population mobility on the northeast border area, further exerting the positive effect of population mobility and limiting its negative impact, can the social and economic development of northeast border area achieve the goal of sustainable development.

4.1. The imbalance of population age and gender structure caused by population mobility

With most young people moving out to work or study, the aging process has accelerated in the northeastern border region. The population aging is not caused by the rapid growth of the elderly population, but the "passive aging" caused by the massive loss of the working age population. At the same time, the rural areas in the northeast border area are not well prepared for the aging population. Under the restriction of the current economic development level in the northeast border area, most villages have no pension institutions, which makes a large number of elderly people with pension needs unable to get corresponding services. Medical and health services also need to be reformed. At present, most villages in the northeast border area have health centers or hospitals. However, it is often impossible to offer high-level medical services when confronted with serious and urgent diseases common to the elderly due to the limitations of hardware and software conditions. The short board of medical care and pension reduces the life quality of elderly in the northeast border area. Another influence that can not be ignored is the phenomenon of "marriage squeeze" and "bachelor" caused by the imbalance of gender structure. With the gradual disintegration of "men working outside and women working inside", the proportion of women in the mobility population keeps increasing, and most women move from rural areas to cities to participate in social production. For single men in rural areas, the large number of marriageable women going out is not a good thing, indicating that it will further strain the region's already competitive marriage market. On the one hand, woman has more contacts and more chances to meet more excellent men after entering the town, thus increasing the conditions for choosing a mate. Even if she is willing to go back to her original place to choose a mate, she will also put forward higher requirements for the individual and family conditions of the man, which will undoubtedly increase the cost of marriage for the man. On the other hand, there is a large space for unmarried women who are not going out due to

the imbalance of supply and demand in the marriage market. In the survey, it is found that many men have very low requirements for women in order to find a partner. Even if the woman has physical or mental illness, or is older and divorced, most men will not refuse. However, this kind of marriage is not happy, which is the root of many family conflicts.

4.2. The loss of human capital caused by population mobility

According to the survey data, the average age of the mobility population in the northeast border area is younger and the education level is higher compared with the total population in the surveyed areas. It can be seen that the overall quality of the mobility population with regard to age structure and education level is relatively high, which can meet the basic requirements of urban industry and service industry for labor force. Enterprises can reduce the labor cost. Commercial, catering and service industries with low industry threshold have also developed rapidly, and labor inflow has greatly alleviated the contradiction between supply and demand of labor resources in urban development.

On the other hand, the loss of high-quality talents in rural areas is a kind of loss for the outflow of population. With the improvement of agricultural mechanization and the popularization of pesticides and chemical fertilizers, agricultural production no longer depends on a large number of labor, but needs high-quality talents who understand science and management. However, it is not very attractive to young people due to the hard work and slow income of agricultural labor. The young and middle-aged labor force in family members often go out to work and hand over the farm work to the elderly. The lack of high-quality agricultural producers has become a bottleneck in developing modern agriculture. However, the loss of high-quality labor force has resulted in a talent gap in the economic and social development of the northeast border area. It is difficult to apply new production technologies and implement new management methods. In the long run, the gap between the northeast border area, which was originally an underdeveloped area, and the developed region will be further widened. This gap will further promote the outflow of high-quality population, forming a vicious circle.

4.3. Population mobility promotes the economic development of northeast border area

Based on the destination of population flow, the population mobility in northeast border area can be divided into domestic flow and cross-border flow.

For domestic population mobility, it promotes the common economic and social development of the inflow and outflow places. For urban areas, the floating population offers sufficient and high-quality labor resources for the

development of cities and towns, greatly reduces the labor cost of enterprises, and improves the market competitiveness of products. For rural areas, the employment of mobility population in the secondary and tertiary industries in cities and towns offers higher economic benefits than agricultural production, speeding up the pace of poverty alleviation for families and rural areas. Furthermore, the mobility population has a high savings rate, which can transfer part of its income to rural areas through savings, remittances, etc., indirectly driving the economic growth of the floating population.

For cross-border population mobility, the cross-border population flow of Jilin and Heilongjiang provinces mainly includes the outflow to South Korea and the outflow and inflow between China and Russia. It is understood that the annual personal income of workers who go to South Korea to work is at least 100000 yuan, and yet it is very difficult for them to reach this level in China. After they get their income, they often go back to their hometown to buy houses in the city, pay for their children's education, get married, etc., which greatly promotes local consumption [6].

The outflow and inflow of population with Russia. Heihe City in Heilongjiang Province has an agreement on an exchange trade zone with Bragoveshinsk City in Amur state of Russia opposite the border. Residents of Bragoveshinsk City can enter the Heihe area without visa with valid certificates, and can freely move within the Heihe area. Russian tourists in Heihe are mainly shopping, vacation and consumption. The residents of Heilongjiang border area mainly come from overseas students, tourists, business personnel, labor personnel, etc. The entry of Russian residents is mainly for consumption, which has played a certain role in promoting the development of Heihe economy. However, the outflow of Heilongjiang border residents to Russia is mainly engaged in production activities and return to their hometown for consumption after obtaining income. Therefore, whether it is cross-border population inflow or outflow, it has a great pulling effect on the development of consumption and tertiary industry in Heilongjiang border area.

5. CONCLUSION

(1) Population mobility in border areas is of great significance to the social and economic development. In the process of population gathering in cities and towns, the development of tertiary industries such as catering, logistics, accommodation, tourism, commodity wholesale, etc., has been promoted. At the same time, factories and enterprises are attracted to settle down and develop economic entities to meet the demand of urban development for capital. In turn, the development of cities and towns will drive the development of surrounding rural areas and lead the transformation of traditional agriculture to modern agriculture with deep processing and high added value. On the other hand, the income earned by labor force plays a vital role in promoting the economic and social development of border areas through labor export.

(2) Population mobility has also had some negative effects on the development of border areas. First, most of the migrant workers are young and middle-aged population. The outflow of high-quality labor has a profound impact on the rural population structure. The hollowing out of the population age structure and the low population sex ratio have a negative impact on the upgrading of agricultural industry, the improvement of agricultural production efficiency and the development of modern agriculture. Second, the natural population growth in border areas, especially in northeast area, is slow or negative due to most migrant workers are of childbearing age. On the other hand, the loss of female population aggravates the sluggish population growth in border areas. In the long run, too low population growth level and population outflow make the population development in rural areas unsustainable and threaten the border areas population security and national security.

(3) In the environment of market economy, it is unrealistic to use administrative means to stop population mobility. In order to solve the issues brought by the population mobility to the economic and social development of the northeast border area, the solution must be found from the root of the population mobility. It is necessary to speed up the economic and social development of the northeast border area, narrow the income gap between regions and shorten the floating distance of migrant workers, so that the mobility population can "leave the land, do not leave their hometown" and maintain a stable population size and structure.

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