

A Review of Regional Differences and Influencing Factors of Social Insurance Fund in China

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Abstract— Social insurance fund is a special fund maintained by the government through the distribution and redistribution of national income and the maintenance of social stability. Social insurance fund is the key and core to keep the social insurance system running normally. In this article, the author sorts out the relevant literature of social insurance fund in China. First of all, a brief introduction to the basic definition of social insurance fund. Then, from a large scope, this paper summarizes the factors that affect the social insurance fund, and then the influence factors of pension funds, medical insurance funds and unemployment insurance funds. Finally, it is about how to measure the regional differences of social insurance fund in China. By analyzing the regional differences and influencing factors of China's social insurance fund, it is helpful to improve the efficiency of fund use. Simultaneously, it can provide a theoretical basis for narrowing regional differences in China. It also can promote the benign interaction between social security and economic and social development.

Index Terms— Social insurance fund income and expenditure, Social security fund, Regional differences, Social insurance fund.

I. INTRODUCTION

Social security is the most basic issue of people's livelihood and has been highly valued by every country. Social insurance is the core of social security. Social insurance plays an important role in social security and indirectly determines the important position of social insurance fund in social security fund. Social insurance fund is the material base of social insurance operation. It is called "life supporting money" and "life saving money" for people. Chinese government has been working on the sustainable development and approximate perfection of social security system since 1998. With the development of economy and the continuous improvement of social security system, the coverage of social insurance is expanding, the number of insured is increasing, and the income and expenditure of social insurance fund are increasing constantly. However, due to China's vast territory and large population, there are obvious differences in the income and expenditure scale of social insurance fund between different regions, showing an unbalanced development. Therefore, this paper starts from the definition of social insurance fund, and then summarizes the provincial differences and influencing factors of social insurance fund revenue and expenditure in China. Finally, a review is made on this basis.

II. THE DEFINITION OF SOCIAL INSURANCE FUND

There are plenty of studies on the definition of social insurance fund. Different scholars have different opinions about the definition of social insurance fund. In general, Zhang Qi ^[1] (2013) believes that the social security fund is the sum of social insurance fund and social welfare fund, social pension fund and social relief fund. In narrow sense, social security fund is social insurance fund. Liang Junlin, Chen Ye ^[2] (2002) says that the social security fund refers to the monetary form of a part of economic resources, which is centralized by the state for the implementation of social security system and through the distribution and redistribution of national income. Zheng Gongcheng ^[3] (2002) classified social insurance fund through different classifications. The social security fund can be divided into social rescue fund, social insurance fund and social welfare fund by project while it can be classified financial social security fund, social insurance fund and social welfare fund by source. Lv Xuejing ^[4] (2007) defined that the social security fund is to achieve the normal operation of the social security system. It includes the social insurance fund and social welfare fund, social rescue fund and social care fund. What's more, the social insurance fund is composed of endowment insurance fund, medical insurance fund, unemployment insurance fund, employment injury insurance fund and maternity insurance fund. Although the definition is inconsistent, the social insurance funds is indeed part of the social security fund.

III. INFLUENCING FACTORS OF SOCIAL INSURANCE FUND

There are many factors that affect the social insurance fund. This article focuses on the following aspects. First of all, starting from the relationship between income and expenditure of social insurance funds. Then, the influence factor of social insurance fund, specific to endowment insurance fund, medical insurance fund, unemployed insurance fund and so on. Finally, the paper discusses the methods of measuring regional differences in China.

A. Social insurance fund income and expenditure

Social insurance fund income and expenditure are two aspects of social insurance fund. Therefore, it is necessary to study the relationship between income and expenditure of social insurance fund. Li Xue, Chen Yuangang, et al ^[5] (2010) shows that there is a significant positive correlation between the income and expenditure of social insurance fund, that is, the long-term equilibrium cointegration relationship

and the short-term dynamic adjustment mechanism between the income and expenditure of social insurance fund in China by using co-integration regression test. In the research on the relationship between insurance fund income and economic development of the society. Li Yaoyao, Sha Zhihui^[6] (2012) using the method of quantitative analysis based on impulse response function to explore the relationship between social insurance fund income and economic, they think that the income of social insurance fund has a large and lasting effect on economic growth, but the impact of economic growth on the social insurance fund income is small and relatively short. Yang Shenggang and Zhu Qi^[7] (2011) found that the population structure and the growth of disposable income affect the income growth of social basic endowment insurance fund based on VAR Model. Chen Hang and Li Jinghua^[8] (2016) established a simple regression model based on time series data of the year 1989-2014, which proved that the basic pension fund expenditure had a significant positive correlation with rural residents' consumption in China. Hu Hangyu^[9] (2008) analyzed and forecast the data of China's 1994-2006 social insurance fund revenue and expenditure. The results show that with the growing population aging, China's social insurance fund will face more severe challenges. Yu Jianhua, Xue Xingli, Li Qiang^[10] (2014) test the relationship between endowment insurance level and GDP by impulse response function and variance decomposition and found that pension fund and GDP affect and contact mutually. Zhang Xisong, Dong Ximing^[11] (2014) found that the five major social insurance have positive or negative gaps in terms of insurance number growth, fund income growth and fund balance growth based on HP filter decomposition and statistical description.

B. Influencing factors of Social security fund

Some scholars have integrated five insurance funds into a social insurance fund and studied them as a whole. Liu Junqiang^[12] (2011) deems that local tax authorities are more conducive to the collection of social insurance funds. Lv Chengchao and Zhang Xuemin^[13] (2015) think that wage level and local fiscal state both have a positive effect on social insurance fund expenditure and income. Social insurance funds can be divided into pension insurance funds, medical insurance funds, unemployment insurance funds, industrial injury insurance funds and maternity insurance funds. This paper also discusses the factors that influence the income and expenditure of social insurance funds from these five aspects. However, there are a few articles about the factors affecting the industrial injury insurance fund and maternity insurance fund. Therefore, this article involves a few on the influencing factors of maternity insurance fund and industrial injury insurance fund.

C. Influencing factors of pension insurance fund

Since twenty-first Century, as an important part of the social insurance system, the pension insurance system is becoming more and more important. Therefore, to establish and improve the pension insurance system is of great significance to the economic development of the countries. Study the influencing factors of pension insurance fund really counts. Ye Chenghui^[14] (2016) shows that the number of pension insurance and social pension insurance fund income

in Hainan province have a long-term equilibrium relationship through the method of Cointegration Test and VAR pulse analysis. Xin Pingfu, Zou Min, et al.^[15] (2007) established an endowment insurance fund balance model, and found that the number of social pension insurance, increment rate, average wage payment, the number of ginseng, contribution rate, pay rate, rate also have an impact on pension insurance fund balance of payments. Li Weihan^[16] (2013) by insurance calculation method on the basis of considering the factors of population, wages and rates, founded that the rate of enterprise collection affects the balance of pension insurance. Li Yuewen, Li Hongyan^[17] (2010) analyzed the data about pension insurance of urban residents in China during the period from 1990 to 2008 and the result shows that the income of pension insurance fund and GDP influence each other. Peng Birong^[18] (2015) argued that the average wage of the employees and the number of employees have a significant impact on the income of the pension fund, while the pension fund expenditure is mainly affected by the number of retirees. Yang Heqing, Chen Wangmang^[19] (2016) innovated classical consumption theory model to test the influence of social security expenditure on household consumption based on panel data of 2000-2007 in China. The results show that the level of the basic pension insurance fund has a positive influence on the consumption level of the year.

D. Influencing factors of medical insurance fund

The medical insurance fund is to protect the medical needs of the insured person. The principle of the operation of medical insurance fund conforms to the principle of rational utilization and rational allocation. Man Yuan^[20] (2011) using actuarial models to estimates the available data in Dalian city, founded that mortality, payment proportion, government grants and life expectancy influence urban basic medical insurance fund in Dalian city. Du Yaqian^[21] (2014) believes that the aging of the population has a significant impact on the expenditure of medical insurance funds. Tian Guodong^[22] (2006) believes that the factors influencing the total expenditure of medical insurance are the age structure and hospitalization rate, the average hospitalization expenses, the number of hospital stay and the hospital level. Lan Ying, Ke Xiong, et al.^[23] (2016) utilize multiple stepwise regression analysis and showed that average medical income per public hospital had an impact on per capita medical insurance fund expenditure. Yang Yansui, Yu Miao^[24] (2014) think the aging population is affecting medical insurance fund because of increased care costs.

E. Influencing factors of unemployment insurance funds

The unemployment insurance fund is the material base of the unemployment insurance system, and also the key to the good operation of the unemployment insurance system. Domestic scholars study the influencing factors of unemployment insurance fund. Zheng Xinye, Wang Han^[25] (2011) claimed to adopt generalized least squares model to analyze the data of China from 2003 to 2007 and found that per capita unemployment insurance fund income and unemployment rate of unemployment insurance personnel are the major determinants of unemployment insurance fund. Zhang Yi^[26] (2015) found that regional economic growth rate, regional industrial structure, urban registration unemployment rate and participation rate were affecting the

expenditures of unemployment insurance fund in Shanxi Province. Dong Fang, Zhou Jiangtao, Zhao Junkang^[27] (2015) analyzed the time series data of the unemployment insurance fund and the re-employment of the unemployed. The result shows that the unemployment insurance fund in the nationwide promotion of the industry function is normal. Chu Xue, Chen Xingpeng, Jia Zhuo^[28] (2016) founded that the level of economic development and the standard of living are the important factors that affect the regional differences of unemployment insurance funds in Jiangsu Province.

IV. MEASURING REGIONAL DIFFERENCES OF SOCIAL INSURANCE FUNDS IN CHINA

Due to the question of time, many fundamental factor of social insurance fund have not acquaintance accord agreement among researchers and practicers. It is necessary that we should research the questions of regional differences of China's social insurance fund to enrich and improve the theoretic system of social insurance. In order to study the differences in the distribution of characteristics of China's eastern, central, west, north-eastern regions pension fund, Liu Yuan^[29] (2013) adopt the Theil index method to obtain the national, northeast, Eastern, central and western four regional differences in the distribution of pension insurance fund. There is an increase pension insurance fund differential distribution based on GDP caliber: The eastern regional differences are the biggest while in the central region is least. The main conclusions are as follows: there is an increase pension insurance fund differential distribution based on GDP caliber. The biggest difference is east region, then the west, followed by the Northeast and the least difference on the central region. Xu Xiaoyin, Han Liqiao^[30] (2006) have analyzed the regional differences of social security level and economic growth. The research shows that the contribution of pension insurance payment level to economic growth has significant regional differences. Li Yougen, Cao Shunfa^[31] (2011) used an empirical analysis to explore regional distribution differences of China's basic endowment insurance and got a conclusion: that is, the more developed areas, the more expenditure per capita pension fund. Peng Haiyan^[32] (2007) found that the differences and the contributions to the difference caused by eastern region, central region and western region are different by the decomposition of GE index and GINI coefficient. Chu Xue, Chen Xingpeng, Jia Zhuo^[28] (2016) analyzed the regional variation of unemployment insurance fund in Jiangsu province by the method of range value, standard deviation, coefficient variation and Theil index. The results show that regional difference of unemployment insurance income has gradually decreased in Jiangsu Province. Yin Jinpeng, Liu Fuxing, Han Mo^[33] (2016) estimates the regional disparity of Social security expenditure level in China by Theil index based on provincial data 1990 to 2013 and found that there are significant differences in social security expenditure in different provinces in China and the between region difference is the main cause.

V. SUMMARY AND PROSPECT

Social security is a very important economic and social problem. The main function of social security is to help people reduce the risks they may encounter in life and work, protect the basic life of the members of society, and enhance their sense of security in life. Social insurance is the core content of social security. Social insurance fund can promote the development of economy, and it is a special means to adjust the income gap.

At present, most domestic scholars measure regional disparity of social insurance fund through the Theil index, and by constructing panel data model to study the social insurance fund. Meanwhile, the research of the social insurance fund is mainly concentrated in a single insurance social insurance fund. For example, most scholars mainly focus on the study of basic endowment insurance funds. Probably because endowment insurance is the earliest and most mature insurance policy in social insurance development. Moreover, the research on the relationship between social insurance fund income and expenditure or the relationship between social insurance fund and other factors, the majority of scholars either through the study of the relationship between social insurance fund revenue and expenditure, economic growth, population structure and consumption of rural residents, or explore the social insurance fund income or expenditure growth in itself. In the analysis of regional differences, regional differences put in a research area within the province, such as Jiangsu Province, or a city, a town. What's more, some scholars divide our country into four areas, such as the east, middle, west and northeast, to study the regional differences of social insurance fund. In terms of influencing factors, most scholars mainly explore the impact of corporate collection rate, number of insured persons, disposable income of residents and economic growth on income and expenditure of social insurance funds. In the operation of social insurance funds, most scholars only make a descriptive statistical analysis of the income, expenditure and balance of social insurance funds, lacking empirical research.

Although the factors affecting various social insurance funds are different. In view of the above literature, the author puts forward the following recommendations. First, the level of economic development is the fundamental factor that influences regional differences in social insurance funds. We should make efforts to improve the investment environment, optimize the industrial structure, and promote the coordinated development of the three major regions in the eastern, central and western regions of china. The balanced development of regional economic development is the basis of balanced development of social insurance fund. Second, we will accelerate the improvement of the income distribution mechanism and gradually narrow the regional wage gap. Then, we will improve the urban social insurance system, especially endowment insurance system and the medical insurance system and gradually narrow the social security gap in urban areas in the eastern Midwest. Finally, each region should adopt the population policy according to its actual conditions and local conditions, so as to realize the sustainable development of the population.

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