A Study on the Influencing Factors of Basic Pension in China's Pension Policy

Jiamei Sun [1,*], Xi Liu [1]

[1] State Grid Jilin Electric Power Co. Ltd., Changchun, Jilin, 132200, China

* Corresponding author's e-mail: 68633404@qq.com

Abstract. With the aging of the population, the level of the basic pension has become more and more concerned by the public. This paper starts from the basic pension, which is the most important part of the basic pension composition, extracts the influencing factors of the basic pension approval based on the basic pension calculation method, and makes preliminary judgment and analysis on the influencing method and degree of each factor.

Keywords: pensions, influencing factors, accruals

1 Introduction

With the aging of the population, the level of pensions has become more and more a matter of public concern. Currently, the national co-ordination of basic pension insurance for Chinese enterprise employees is in steady progress, but the approved pension policies for each provincial administrative region are still formulated by the government departments of each region, and there are big differences. The composition of pensions in the policies of each region is relatively similar, generally consisting of three parts: basic pension, transitional pension, and personal account pension, with some regions adding other subsidies on top of the above three parts based on the needs of local development. The basic pension is the most important part of the pension composition, and the policies of various regions are relatively uniform, so deepening the study of the factors influencing the basic pension will provide a useful reference for employees to analyze the level of their pensions and for the State to unify its approved policies.

2 How the Basic Pension is Calculated

According to the Decision of the State Council on Improving the Basic Pension Insurance System for Enterprise Employees (Guo Fa [2005] No. 38) (hereinafter referred to as "Document No. 38"), "the monthly standard of the basic pension at the time of retirement shall be based on the average of the average monthly salary of the local employees on the job in the previous year and the average of the individual's indexed

J. Liu et al. (eds.), *Proceedings of the 2024 4th International Conference on Public Art and Human Development (ICPAHD 2024)*, Advances in Social Science, Education and Humanities Research 910,
https://doi.org/10.2991/978-2-38476-378-8_32

monthly contributions. The monthly rate of the basic pension at the time of retirement shall be based on the average of the local average monthly wages of employees in service in the previous year and their indexed average monthly contributions, with 1% being paid for every year of contributions. The calculation of the basic pension in all regions is carried out in accordance with the above provisions, and the basic pension is approved in accordance with the following formula, although there are some differences between regions in the selection of the relevant parameters for the specific participation in the calculation.

The formula for calculating the basic pension is:

Basic pension=(calculation base + indexed average monthly contribution salary) ÷ 2 × (actual contribution period + deemed contribution period) × calculation ratio

Indexed average monthly contribution salary = calculation base × average contribution salary index

The calculation of the average contribution wage index is divided into two categories: one is to use the average of the deemed contribution wage index and the actual contribution wage index as the average contribution wage index; the other is to use the actual contribution wage index directly.

Actual contribution wage index=(contribution base in the year of retirement ÷ social wage in the year of retirement + contribution base 1 year prior to retirement ÷ social wage 1 year prior to retirement + contribution base 2 years prior to retirement ÷ social wage 2 years prior to retirement + ... + contribution base n years prior to retirement ÷ social wage n years prior to retirement) ÷ actual number of contribution years

3 Analysis of Factors Affecting the Basic Pension [1]

According to the above formula, the differences in policy regarding the basic pension in various regions are mainly reflected in the differences in seven factors, including the basis for calculation, the contribution base, the social parity wage, the index of the deemed contribution wage, the number of years of deemed contribution, the actual number of years of contribution, and the rate of calculation. [2]

3.1 Payment Base

The base figure is generally related to the level of local economic development and the wage level of employees, mainly reflecting the principle that the basic pension is compatible with the living standard of the location. This data is determined and published uniformly every year by the human resources and social welfare departments in conjunction with the local level of social wages, and the same local data is used for the same year's retirees in each place. In accordance with the relevant provisions, the calculation base in each region is gradually being transitioned to the level of social wages that determines the upper and lower limits of the contribution base. The calculation base is an important factor affecting the level of the basic pension. As one of the multipliers used to calculate the basic pension, this parameter has a significant impact on the size of the final product, and the size of the calculation base will proportionally affect the level of the basic pension, provided that the cumulative number of years of contribution remains unchanged in relation to the calculation ratio. [3]

In addition, the basis for calculation also participates as a multiplier in the calculation of the indexed average monthly contribution wage, i.e. this parameter not only affects the basic pension as a separate multiplier, but also directly plays an important role in the possible range of the other multiplier, the indexed average monthly contribution wage, which has an even greater impact on the level of the basic pension.

3.2 Contribution Base

The contribution base is usually determined on the basis of the employee's own average monthly salary for the previous year, which is generally no more than 300% and no less than 60% of the local average social wage.

This parameter will be used as the numerator in the calculation of the actual contribution wage index of the previous year. The higher the contribution base is, the higher the actual contribution wage index is, the more prominent the parameter's amplifying effect on the indexed average monthly contribution wage is, and the level of the basic pension will be raised, and vice versa will be lowered.

3.3 Social Wages

The social wage is the amount of wages that determines the upper and lower limits of the basic pension insurance contribution base in each region, and is published annually by the statistical department.

This parameter corresponds to the contribution base and serves as the denominator in the calculation of the actual contribution wage index in previous years. The higher the social wage is, the lower the actual contribution wage index is, which will lower the indexed average monthly contribution wage, and the level of the basic pension will be reduced accordingly.

It should be noted that, when the basic pension insurance relationship of the employee is transferred, especially from the economically developed region to the less developed region, if the social wage of the transferring place is lower than that of the transferring place, the actual contribution wage index may be more than 3. For employees who enroll in a region with a higher base and retire in a region where the social wage is lower and the index is not capped, the expansion of the actual contribution wage index will be more pronounced, and the effect on the level of the basic pension will also become greater.[4]

3.4 Deemed Contribution Wage Index

In some regions, the index of the deemed contribution wage participates in the calculation of the average contribution wage index. The index is usually a fixed value, with most regions having an index of one.

For employees with a higher contribution base, the participation of the deemed contribution wage index in the calculation usually lowers the average contribution wage index, thus lowering the level of the basic pension. Of course, in practice, there are also employees with a lower contribution base, the actual contribution wage index will be less than the deemed contribution wage index, at this time, the deemed contribution wage index will be able to pull up the average contribution wage index, which will play a role in raising the level of the basic pension.[5]

3.5 Deemed Contribution Period

The deemed contribution period refers to the time of continuous service calculated in accordance with state regulations before the establishment of the basic pension insurance individual account by the employee, i.e. the time from the employee's participation in work to the establishment of the basic pension insurance individual account. According to the Decision of the State Council on the Reform of the Pension Insurance System for Staff of Organs and Institutions (Guo Fa [2015] No. 2), since October 1, 2014, staff of organs and institutions have been implementing a basic pension insurance system combining social integration and individual accounts. As a result, except for veterans, the maximum deemed contribution period for employees should be from the time they joined the workforce until September 2014. This parameter has the following two main effects on the level of the basic pension:

Influence on the Average Contributory Wage Index. For regions where both the actual and deemed contribution wage indexes are considered in the calculation of the average contribution wage index, the number of years of deemed contribution does not play a separate role. However, since the deemed contribution wage index in some regions is fixed and lower than the actual contribution wage index, in the above regions, a longer deemed contribution period may lower the average contribution wage index as a whole and adversely affect the basic pension level.[6]

For regions where only the actual contribution index is taken into account in the calculation of the average contribution index, the effect of the number of years of deemed contributions is mainly related to the level of the contribution base.

Direct Impact on the Level of Basic Pension. The base pension is based on the accumulated contribution years of the employee, and 1% is paid for every full year, so it is obvious that the longer the accumulated contribution years are, the higher the base pension is. Similar to the calculation of the average contribution wage index, the deemed contribution period is also part of the accumulated contribution period and does not play a separate role in the calculation of the basic pension, and for the majority of the company's employees, this period has a clear upper limit and basically does not have any room for upward adjustments, so this parameter does not play a prominent role in the calculation of the basic pension.

3.6 Actual Contribution Period[7]

Actual contribution period refers to the number of years that an employee has actually paid basic pension insurance premiums, i.e. the time that an employee has actually paid basic pension insurance premiums during the period between the establishment of his/her basic pension insurance individual account and the month of his/her retirement. Same as the deemed contribution period, this parameter has the following two main effects on the basic pension level:

Influence on The Average Contribution Wage Index. For regions where only the actual contribution wage index is considered in the calculation of the average contribution wage index, the impact of this parameter on the basic pension of a particular employee needs to be comprehensively determined in conjunction with his or her actual contribution situation.[8]

For regions that consider both the actual and deemed contribution wage indexes in the calculation of the average contribution wage index, the actual contribution years are the same as the deemed contribution years and do not play a separate role. If an employee's actual contribution base is high, then a longer actual contribution period will generally raise his or her average contribution wage index as a whole and increase the level of basic pension.

Direct Impact on the Level of the Basic Pension. Same as the deemed contribution period, the longer the actual contribution period, the higher the basic pension will be. However, compared with the deemed contribution period, the actual contribution period has a more obvious effect on the increase of the basic pension level.

3.7 Payment Ratio

As with the accumulated contribution period, the higher the payout ratio, the higher the level of the basic pension. According to the provisions of Article 38, the basic pension calculation ratio is usually 1% in each region.

4 Conclusion

There are more factors affecting the approval of pensions, and they can be summarized as their own conditions, the method of calculation and regional factors, and the specific level of basic pensions for employees needs to be determined in combination with the policies of each region and their own conditions.

References

1. Erik Hernæs, Simen Markussen, John Piggott and Knut Røed, The impact of pension reform on employment, retirement, and disability insurance claims, Journal of Population Economics (2024) 37-76, DOI: 10.1353/wp.2024.a916344
2. Michał Kałdoński and Tomasz Jewartowski, Governance through exit: Pension fund reform impact on real earnings management of portfolio companies, Review of Quantitative Finance and Accounting (2024) 63:1349–1389, DOI: 10.1007/s11156-024-01294-0
3. Itzik Fadlon，Jessica A. Laird and Torben Heien Nielsen, Do Employer Pension Contributions Reflect Employee Preferences? Evidence from a Retirement Savings Reform in Denmark, Working Paper 21665(National Bureau of Econimic Research), DOI：10.3386/w21665
4. Friedrich L. Sell, The Portuguese Dilemma of Unstable Pensions, Intereconomics, 2022, 57(6), 394-398, DOI: 10.1007/s10272-022-1093-y
5. De-Lei Sheng, Linfeng Shi, Danping Li and Yanping Zhao, Manage Pension Deficit with Heterogeneous Insurance, Methodology and Computing in Applied Probability, Volume 24, pages 1119–1141, (2022), DOI:10.1007/s11009-022-09960-3
6. Kadir Atalay and Garry F. Barrett, The Impact of Age Pension Eligibility Age on Retirement and Program Dependence: Evidence from an Australian Experiment, The Review of Economics and Statistics (2015) 97 (1): 71–87, DOI: 10.1162/REST_a_00443.
7. Arild Aakvik, Tor Helge Holmås and Egil Kjerstad, Health status, life expectancy and early claiming of pension, SN Bus Econ (2024) 4-45, DOI: 10.1007/s43546-024-00640-7
8. Olga M. Fuentes, Richard K. Fullmer and Manuel García-Huitrón, A sustainable, variable lifetime retirement income solution for the Chilean pension system, The Geneva Papers on Risk and Insurance - Issues and Practice (2024) 49:234–258, DOI: 10.1057/s41288-024-00315-2