

Study on Urban-rural Differences in the Choice of Insurance Participation Grades of Urban and Rural Residents' Basic Endowment Insurance under the Urban-rural Dual Structure: Based on Yangzhou

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Abstract

Against the backdrop of advancing urban-rural integration and deepening population aging, the basic pension insurance system for urban and rural residents is shifting from "quantitative expansion" to "qualitative improvement". To analyze the differences in the choice of insurance premium grades between urban and rural residents and solve the problem of "low-grade lock-in" among rural residents, this paper takes three districts and counties in Yangzhou, namely Hanjiang, Jiangdu and Gaoyou as research objects. By adopting the multi-stage stratified random sampling method, surveys were conducted among urban and rural insured residents and grassroots social security administrators, obtaining 250 valid questionnaires and 32 interview records. Descriptive statistics, correlation analysis and binary Logistic regression analysis were carried out using SPSS 26.0. The results show that there are significant differences in the choice of insurance premium grades between urban and rural residents in Yangzhou. 67.2% of rural residents choose the minimum grade of 300 yuan, with only 12.4% willing to upgrade, showing an obvious feature of "low-grade lock-in"; more than 80% of urban residents choose medium and high grades, with an upgrade willingness of 58.9%. Household per capita disposable annual income and policy cognition have an extremely significant positive impact on the choice of insurance premium grades; education level, household registration type and digital operation ability have a significant positive impact, while age has a significant negative impact. On this basis, this paper puts forward optimization paths from four aspects: income improvement, precise policy transmission, service equalization and optimized treatment incentives, so as to provide empirical support and decision-making reference for Yangzhou to improve the urban and rural residents' pension insurance policy and promote the substantive equalization of the social security system.

Keywords

Basic pension insurance for urban and rural residents; choice of insurance premium grade; urban-rural dual structure; low-grade lock-in.

1. Introduction

Since the unified national implementation of China's basic pension insurance system for urban and rural residents in 2014, the system has achieved the phased goals of full institutional coverage and extensive population coverage. It is now in a critical period of transformation from "wide coverage" to "high-quality coverage". As a core microeconomic behavior of insured individuals, the choice of premium grade directly determines the accumulation of personal account pension funds and the long-term level of old-age security, making it a key measure for evaluating the effectiveness of the system and ensuring its sustainable operation. As an

important node city for urban-rural integration in central Jiangsu, Yangzhou had a permanent urbanization rate of 73.5% by the end of 2024, with 560,900 residents covered by the basic pension insurance system. The minimum basic pension benefit has been raised to 240 yuan per person per month, 12 yuan higher than the provincial standard set by Jiangsu Province, reflecting a steady improvement in basic security capacity.

However, during system implementation, the premium payment behavior of insured residents in Yangzhou shows significant urban-rural differentiation: rural insured residents generally choose the lowest premium grade with little willingness to upgrade, forming a typical "low-grade lock-in" phenomenon. In contrast, urban insured residents exhibit a gradient distribution in grade selection corresponding to income levels and old-age security needs. This differentiation has widened the gap in personal account pension accumulation between urban and rural residents, weakening the fairness and inclusiveness of the system and restricting the improvement of old-age security for rural residents, thus becoming a core bottleneck for the high-quality development of the urban and rural residents' pension insurance system in Yangzhou.

Existing studies on the insurance participation behavior of urban and rural residents mostly rely on national or provincial data. Local empirical research on urban-rural differences in premium grade selection and their micro formation mechanisms at the prefecture-level, especially in the context of urban-rural integration in central Jiangsu, remains insufficient. Similarly, targeted solutions tailored to local conditions for addressing rural residents' "low-grade lock-in" are lacking. Therefore, taking Yangzhou as a case study, this paper uses first-hand micro survey data to systematically analyze the characteristics of urban-rural differences in premium grade selection, identify the core influencing factors and mechanisms, and propose context-appropriate optimization paths to provide empirical support for local policy improvement.

2. Literature Review

2.1. Foreign Related Research

More than 170 countries around the world have established old-age security systems. Different from China's institutional context of urban-rural household registration division, foreign pension insurance systems are mostly linked to occupational attributes without such a division. Relevant studies provide theoretical and methodological references for this paper from three dimensions.

First, the identification of influencing factors on insurance participation behavior. Scholars have reached a consensus that income level is the core variable determining contribution choices, while the rationality of policy design, institutional trust, and individuals' value perception of long-term security significantly regulate their contribution decisions (Hartmut, 2005; Robert Holzmann, 2017)[1]. Wouter Van Ginneken (2021) further supplemented from the demand side that low- and middle-income groups pay more attention to immediate risks such as diseases and income-expenditure fluctuations, with relatively insufficient attention to long-term security such as pension insurance, which directly restricts their enthusiasm for participation and contribution.

Second, the impact of individual heterogeneity on insurance participation decisions. Through a cross-country empirical study, Marika et al. (2021) found that individual characteristics such as education level and family structure of the insured population lead to significant differences in the implementation effect of social security policies. Brinch et al. (2018) further pointed out in their research on the elderly that the accessibility of social security services and the word-of-mouth communication of policies are key factors affecting the contribution decisions of the elderly[2]. Trianti's (2015) study confirmed that the insured's value perception of pension

insurance and institutional trust significantly affect their contribution decisions, in which the accessibility of policy information and communication efficiency serve as important moderating variables[3].

Third, the correlation between income distribution and pension insurance system. Research by Verberi & Kaplan (2024) based on multinational panel data shows that the public pension system has a significant income redistribution effect, but different income groups show obvious heterogeneity in their responses to the system[4]. A mainstream consensus has been formed in academia: income level is significantly positively correlated with pension insurance contribution level, and high-income groups are more inclined to choose high contribution grades to improve their long-term old-age security level (Haejeong et al., 2012; Robret et al., 2015)[5][6].

2.2. Domestic Related Research

Domestic studies on the basic pension insurance for urban and rural residents that are relevant to the core theme of this paper mainly focus on two fields.

First, research on the incentive mechanism and benefit level of the urban and rural residents' pension insurance system. At present, the domestic academic community has generally confirmed that the nationwide "minimum-grade lock-in" phenomenon exists in China's urban and rural residents' pension insurance system, and it is more prominent in rural areas. In response to this problem, a relatively consistent understanding has been formed in academia: the key to improving the security level of the urban and rural residents' pension insurance lies in coordinated efforts from three aspects: financing and contribution, benefit adjustment, and incentive guidance. Scholars generally agree that the contribution base and grade design should be optimized to strengthen the positive incentive of "more pay, more benefit; longer pay, more benefit". Meanwhile, the basic pension benefit adjustment mechanism should be standardized and improved to narrow the benefit differentiation caused by regional and overall planning level differences. In addition, it is necessary to guide the insured to choose higher contribution grades through differentiated contribution subsidies and targeted policy publicity, so as to expand personal account accumulation and fundamentally enhance the old-age security capacity of the system (Lu Quan, 2020; Xu Tingting, Wei Yuanzhu, 2021; Zhang Hanbo, 2025)[7][8][9].

Second, research on the influencing factors of insurance participation behavior in the urban and rural residents' pension insurance. Regarding the influencing factors of insurance participation behavior, although there are some differences in views in the domestic academic community, a mainstream consensus has been formed: income level, policy cognition, and education level are the core variables affecting the choice of contribution grade in the urban and rural residents' pension insurance, and the influence mechanisms vary significantly among different groups (Mu Huaizhong, Yan Linlin, 2012; Shi Renbing, Chen Ning, 2015; Du Shanshan, 2021)[10][11][12].

2.3. Research Review

Existing research still has two areas for improvement. First, foreign studies are based on institutional contexts without urban-rural household registration division, making their conclusions difficult to adapt to China's national conditions with the urban-rural dual structure. Most domestic studies focus on the national or provincial level, and there is a lack of localized empirical evidence for prefecture-level cities in central Jiangsu. Second, existing research lacks a systematic analysis of the formation mechanism of urban-rural differences in premium grade selection, especially the transmission path of rural "low-grade lock-in". Most policy recommendations are general frameworks without sufficient local adaptability. Therefore, this

paper takes Yangzhou as a case to conduct an empirical analysis, so as to remedy the deficiencies of existing studies.

3. Research Design

3.1. Survey Objects and Sampling Method

Combined with the urbanization level and economic development gradient of each district and county in Yangzhou, this survey adopts the multi-stage stratified random sampling method. Three districts and counties with high, medium and low urbanization levels, namely Hanjiang, Jiangdu and Gaoyou, are selected as the core research areas. Corresponding towns (sub-districts) and villages (communities) are stratified by urban and rural household registration. Finally, insured residents aged 18–60 participating in the basic pension insurance for urban and rural residents are randomly selected as the core research objects. Meanwhile, 32 grassroots social security administrators and insured residents are interviewed, and supplementary qualitative data are obtained through semi-structured interviews.

3.2. Questionnaire Design and Reliability and Validity Test

The questionnaire mainly consists of closed items, designed with reference to existing mature scales and combined with the actual policy of urban and rural residents' pension insurance in Yangzhou, with a total of 28 items covering four core dimensions: individual and family characteristics, subjective cognition, insurance participation behavior, and decision-making influencing factors. After a pre-survey of 50 samples and expert revision, the overall Cronbach's α coefficient of the questionnaire is 0.827, the KMO value is 0.782, and the p-value of Bartlett's test of sphericity is less than 0.001, indicating good reliability and validity that meet the requirements of quantitative analysis.

3.3. Data Sources and Research Methods

The survey was conducted from July to August 2024. A total of 300 questionnaires were distributed online and offline. After eliminating invalid questionnaires, 250 valid samples were finally obtained, with an effective recovery rate of 83.3%. This paper comprehensively uses descriptive statistics, Spearman correlation analysis and binary Logistic regression model for empirical testing.

4. Empirical Analysis

4.1. Descriptive Statistics of Samples

4.1.1. Individual and Family Characteristics of Samples

The demographic characteristics of the 250 valid samples are shown in Table 1. The urban-rural household registration ratio, age distribution, income structure and other indicators of the samples are highly consistent with the actual distribution of the insured population of the basic pension insurance for urban and rural residents in Yangzhou, indicating good representativeness.

4.1.2. Urban-Rural Differences in the Choice of Insurance Premium Grade

According to the official premium grade structure of Yangzhou's basic pension insurance for urban and rural residents in 2024 (the 100-yuan grade applies only to disadvantaged groups such as minimum living allowance recipients and the extremely poor; the premium grades for general insured residents range from 300 yuan/year to 6,000 yuan/year, with 12 grades in total), and referring to the common classification standard in existing studies (Xue Huiyuan, 2021), the premium grades are integrated into 5 levels: Level 1 (300 yuan/year, the minimum grade), Level 2 (400–500 yuan/year), Level 3 (600–1000 yuan/year), Level 4 (1500–2500

yuan/year), and Level 5 (3000 yuan/year and above). Grades 1–2 are defined as low-grade, and Grades 3–5 as medium-to-high-grade.

Table 1. Distribution of Individual and Family Characteristics of the Sample

Classification Variable	Category	Sample Size (Persons)	Percentage (%)
Gender	Male	122	48.8
	Female	128	51.2
Household Registration	Rural	177	70.8
	Urban	73	29.2
Age	18-44	78	31.2
	45-60	109	43.6
	60 and above	63	25.2
Education Level	Junior High School or Below	146	58.4
	Senior High School / Technical Secondary School	58	23.2
	Junior College or Above	46	18.4
Annual Per Capita Disposable Household Income	<30000 yuan	121	48.4
	30000-80000 yuan	92	36.8
	>80000 yuan	37	14.8

The urban-rural distribution of insurance premium grade choices is shown in Table 2. The results indicate that there is a significant dualistic differentiation in the premium grade choices of insured residents in Yangzhou: rural residents show a strong low-grade lock-in feature, while urban residents present an obvious gradient distribution in grade selection.

Table 2. Contingency Table of Urban-Rural Distribution in Insurance Premium Grade Selection

Premium Grade	Rural Household Registration n(%)	Urban Household Registration n(%)	Total n(%)
Level 1	119(67.2)	13(17.8)	132(52.8)
Level 2	35(19.8)	12(16.4)	47(18.8)
Level 3	5(2.8)	27(37.0)	32(12.8)
Level 4	15(8.5)	15(20.5)	30(12.0)
Level 5	3(1.7)	6(8.2)	9(3.6)

4.2. Correlation Analysis of Insurance Premium Grade Selection

To preliminarily identify the correlation between each variable and insurance premium grade selection, this paper sets the explained variable "insurance premium grade selection" as a binary variable (low-grade choice is coded as 0, medium-to-high-grade choice is coded as 1). Potential influencing variables from three dimensions—individual characteristics, family characteristics, and social characteristics—are selected for Spearman correlation analysis. The results are shown in Table 3.

Table 3. Results of Correlation Analysis between Insurance Premium Grade Selection and Influencing Factors

Variable Dimension	Specific Variable	Spearman's ρ -value	p-value
Individual Characteristics	Gender	0.052	0.325
	Age	-0.289	0.036
	Education Level	0.367	0.000
Family Characteristics	Annual per capita disposable household income	0.528	0.000
	Marital Status	0.076	0.287
	Housing Area	0.089	0.215
Social Characteristics	Household Registration Type	0.415	0.000
	Policy Cognition Level	0.486	0.000
	Digital Operation Ability	0.395	0.000

The correlation analysis shows that age is significantly negatively correlated with insurance premium grade selection ($p < 0.05$). Education level, annual per capita disposable household income, household registration type, policy cognition, and digital operation ability are all extremely significantly positively correlated with insurance premium grade selection ($p < 0.001$). Gender, marital status, and housing area show no significant correlation.

4.3. Binary Logistic Regression Analysis

4.3.1. Variable Setting

Based on the results of correlation analysis, variables with no significant influence are excluded. Finally, six core explanatory variables are selected to construct the binary Logistic regression model. The definition and assignment of each variable are shown in Table 4.

4.3.2. Model Construction

This paper adopts the binary Logistic regression model to analyze the direction and intensity of the effects of various factors on the premium grade choice of insured residents. Let P be the probability that an insured resident chooses a medium-or-high premium grade, and $1-P$ be the probability of choosing a low grade. The regression model is constructed as follows:

$$\text{Logit}(P) = \ln\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \mu_i$$

Where β_0 is the constant term, $\beta_1 - \beta_6$ are the regression coefficients of each explanatory variable, and μ_i is the random error term.

The model fitness test shows that the Hosmer-Lemeshow test yields $p = 0.594 > 0.05$, indicating a good fit. The variance inflation factors (VIF) of all explanatory variables are less than 5, showing no multicollinearity. Nagelkerke $R^2 = 0.672$, suggesting a relatively high explanatory power of the model.

Table 4. Definition and Assignment of Variables for Binary Logistic Regression Analysis

Variable Type	Variable Name	Variable Symbol	Assignment Method
Dependent Variable	Insurance Premium Grade Selection	Y	Low grade (Grade 1–2) = 0; Medium-to-high grade (Grade 3–5) = 1
Independent Variables	Age	X1	18–44 years old = 1; 45–60 years old = 2; 60 years old and above = 3
	Education Level	X2	Junior high school or below = 1; Senior high school / technical secondary school = 2; Junior college or above = 3
	Annual Per Capita Disposable Household Income	X3	< 30,000 yuan = 1; 30,000–80,000 yuan = 2; > 80,000 yuan = 3
	Household Registration Type	X4	Rural = 1; Urban = 2
	Policy Cognition Level	X5	Completely unaware = 1; Partially aware = 2; Fully aware = 3
	Digital Operation Ability	X6	Cannot use = 1; Basic use = 2; Proficient use = 3

4.3.3. Regression Results and Analysis

Stepwise regression AE 2 was conducted on the model using SPSS 26.0. The final regression results are shown in Table 5.

Table 5. Results of Binary Logistic Regression Analysis

Variable	B	SE	Wald	df	P-value	Exp(B)	95%CI
Age (X1)	-0.625	0.281	4.952	1	0.026	0.535	0.301-0.952
Education Level (X2)	0.886	0.214	17.126	1	0.000	2.425	1.593-3.694
Income (X3)	1.842	0.321	32.875	1	0.000	6.312	3.186-12.510
Household Registration Type (X4)	0.918	0.382	5.786	1	0.016	2.504	1.187-5.283
Policy Cognition Level (X5)	1.512	0.276	29.658	1	0.000	4.536	2.548-8.072
Digital Operation Ability (X6)	0.746	0.354	4.442	1	0.035	2.108	1.054-4.216
Constant	-8.196	1.021	64.587	1	0.000	0.000	—

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

The results show that all six variables have significant effects on insurance premium grade selection. The detailed analysis is as follows:

First, annual per capita disposable household income is the primary core factor, with an extremely significant positive effect. Holding other variables constant, each increase in the level of annual per capita disposable household income raises the odds of choosing medium-to-high premium grades by a factor of 6.312. Higher income levels correspond to stronger payment capacity and greater preference for higher premium grades.

Second, policy cognition is the second core factor, with an extremely significant positive effect. Each increase in policy cognition level raises the odds of choosing medium-to-high premium grades by a factor of 4.536. Respondents with a clearer understanding of the core incentive principle of “more pay, more benefit; longer pay, more benefit” are more willing to select higher premium grades.

Third, education level and household registration type both have significant positive effects. Each increase in education level raises the odds of choosing medium-to-high premium grades by a factor of 1.425. Urban household registration respondents have 2.504 times higher odds of choosing medium-to-high premium grades than rural household registration respondents.

Fourth, digital operation ability has a significant positive effect. Stronger digital operation ability enables more convenient access to policy information and premium grade adjustment services, thus increasing the probability of choosing medium-to-high premium grades.

Fifth, age has a significant negative effect. Each increase in age level reduces the odds of choosing medium-to-high premium grades by 46.5%, and middle-aged and elderly groups are more inclined to choose low premium grades.

5. Research Conclusions and Policy Recommendations

5.1. Research Conclusions

Based on 250 valid questionnaires and 32 semi-structured interviews from three districts and counties in Yangzhou, this paper systematically analyzes the urban-rural differences and core influencing mechanisms of premium grade selection in the basic pension insurance for urban and rural residents under the urban-rural dual structure using descriptive statistics, Spearman correlation analysis, and binary Logistic regression analysis. Three core conclusions are drawn as follows:

First, there is a significant dualistic differentiation in premium grade selection for urban and rural residents' pension insurance in Yangzhou, and the phenomenon of low-grade lock-in is prominent among rural residents. 67.2% of rural insured residents choose the minimum premium grade of 300 yuan, only 23.0% choose medium-to-high grades, and the willingness to upgrade is merely 12.4%. In contrast, urban residents show a gradient distribution in grade selection: more than 80% choose medium-to-high grades, and the upgrade willingness reaches 58.9%, revealing a substantial gap between urban and rural groups.

Second, premium grade selection is comprehensively affected by multiple factors with distinct directions and intensities. Annual per capita disposable household income and policy cognition are the two core factors, exerting extremely significant positive effects. Education level, household registration type, and digital operation ability have significant positive effects, while age has a significant negative effect. The inherent urban-rural gaps in income, policy awareness, education, and digital capacity constitute the fundamental cause of the divergence in premium grade selection.

Third, the urban-rural imbalance in social security service supply is an important external factor that reinforces the divergence in premium grade selection. The survey shows that 63.3% of rural respondents cannot independently complete online social security operations, and only

38.4% of village-level social security service stations provide full-process services for premium grade adjustment. The accessibility and convenience of social security services in rural areas are significantly lower than those in urban areas. Even if some rural residents have the payment capacity and willingness to upgrade, they are hindered by service barriers.

5.2. Policy Recommendations

Based on the above conclusions, and in strict accordance with the current policy framework of the basic pension insurance for urban and rural residents at the national level, Jiangsu Province and Yangzhou, this paper puts forward targeted and locally applicable optimization paths from four dimensions to solve the dilemma of "low-grade lock-in" among rural residents, stimulate the willingness of insured subjects to upgrade their contribution grades, and promote the transformation of the urban and rural residents' pension insurance system from "formal unity" to "substantive equality".

First, broaden channels for rural residents to increase their incomes and consolidate the economic foundation for premium grade upgrading. Income level is the primary factor affecting the choice of insurance premium grades. The core to solving the "low-grade lock-in" of rural residents is to raise their income levels. On the one hand, relying on the rural revitalization strategy, we should expand ways for rural residents to increase their incomes: combining with characteristic agricultural industries in Yangzhou such as Gaoyou ducks, Jiangdu flowers and trees, and Hanjiang rural tourism, improve the benefit linkage mechanism of "enterprise + cooperative + farmer" to increase the operational income of rural residents; carry out targeted vocational skills training for rural labor force, promote high-quality transfer employment of rural labor force, and increase their wage income. On the other hand, we should improve the contribution subsidy mechanism of urban and rural residents' pension insurance: implement the collective subsidy pilot policy of urban and rural residents' pension insurance in Jiangsu Province, encourage eligible village collective economic organizations to provide contribution subsidies for insured residents, and form a tripartite commitment mechanism of "individual contribution + government subsidy + collective subsidy"; for disadvantaged groups such as rural subsistence allowance recipients and the extremely poor, strictly implement the policy of full payment of the minimum premium by the government, and provide step-by-step incentives and subsidies for their voluntary premium upgrading to reduce the economic pressure of premium upgrading.

Second, optimize the policy publicity and transmission mechanism to improve the policy cognition of rural residents. Insufficient policy cognition is the core bottleneck restricting rural residents from upgrading their contribution grades, so precise and localized policy publicity is needed. On the one hand, we should optimize the content and form of publicity: in view of the high proportion of middle-aged and elderly rural residents, produce short videos and graphic manuals of policy interpretation in Yangzhou dialect, and intuitively present the differences in government subsidies and pension benefits of different contribution grades with practical cases of "how much to pay, how much to subsidize and how much to receive", so as to eliminate the cognitive misunderstandings of insured residents; regularly interpret the core incentive policy of "more pay, more benefit; longer pay, more benefit" of urban and rural residents' pension insurance through village-level broadcasts, grid members' home publicity, social security policy fairs and other forms acceptable to rural residents, focusing on clarifying the current policy that "choosing grades of 500 yuan and above can enjoy an annual government subsidy of 60 yuan, and the basic pension will be increased by 1% for each additional year of contribution beyond 15 years". On the other hand, we should strengthen the grass-roots policy implementation capacity: include village-level grid members into the unified management of township social security agencies, regularly carry out professional training such as policy interpretation and pension benefit calculation, and improve the policy transmission capacity of grass-roots staff.

Third, promote the equalization of urban and rural social security services and break the service barriers for premium upgrading. In view of the shortcomings of rural social security services, we should build an urban-rural integrated social security service system. On the one hand, we should improve the hardware facilities of rural social security services: make clear that the full coverage of self-service terminals in rural village-level social security service stations across the city will be completed by the end of 2026, add functions of "one-click calculation of grade benefits" and "one-click handling of grade adjustment" in self-service terminals, so as to realize "nearby handling and one-time handling" for rural insured residents; for areas with weak rural network, add mobile social security service vehicles to enter villages and households at fixed times every month to provide door-to-door services such as policy consultation, grade adjustment and smart phone operation training. On the other hand, we should optimize the functions of online social security services: upgrade the "Yangzhou Human Resources and Social Security" APP and WeChat official account, add functions of "elderly mode", "voice navigation" and "agency by children", and simplify the online operation process; establish a remote assistance mechanism between urban social security agencies and rural village-level service stations, implement the mode of "online agency + offline assistance", encourage urban social security staff to sink to rural areas for paired assistance, and improve the professionalism of rural social security services.

Fourth, optimize the institutional incentive mechanism and strengthen the positive correlation between contribution and benefits. Within the policy framework of urban and rural residents' pension insurance at the national level and Jiangsu Province, further optimize the institutional incentives of "more pay, more benefit; longer pay, more benefit". On the one hand, we should improve the normal adjustment mechanism of basic pension: steadily raise the basic pension standard for urban and rural residents according to the economic development level and price changes in Yangzhou, ensuring that the adjustment range is not lower than the standard set by Jiangsu Province; for insured residents who have contributed continuously for more than 15 years and chosen medium and high grades, appropriately increase the additional proportion of length-based basic pension on the basis of the current 1% additional standard. The longer the contribution period and the higher the contribution grade, the higher the additional proportion, so as to strengthen the incentive orientation of long-term and more contribution. On the other hand, we should establish a high-grade contribution incentive mechanism: referring to the current high-grade contribution incentive policy in Gaoyou City, establish an individual account incentive subsidy system for insured residents who choose to contribute at grades of 1,000 yuan and above, and provide individual account subsidies at a certain proportion of the annual contribution amount; for insured residents who have been upgraded from low grades to medium and high grades and continued to contribute, give a one-time individual account reward at a certain proportion of the annual contribution amount to stimulate the endogenous motivation of insured residents to take the initiative to upgrade their grades.

5.3. Research Limitations and Future Prospects

This study has two limitations. First, the survey samples only cover three districts and counties in Yangzhou, and the regional representativeness needs to be improved. Second, cross-sectional data are adopted, which cannot capture the dynamic changes in insurance premium grade selection.

Future research can be deepened in two aspects. First, expand the scope of the survey to cover all districts and counties in Yangzhou, and select similar cities in central Jiangsu for comparative analysis to improve the universality of the conclusions. Second, carry out panel data tracking surveys to capture the dynamic evolution characteristics of insurance participation behavior, so as to provide more accurate support for policy optimization.

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