

Examining the Uniformity Model of Received Premium Rates on Innovation in the Financial Management Policies of the Social Security Organization

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Article Info

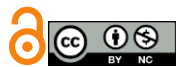
Article type:

Original Research

How to cite this article:

Mohammadlu, A., Asghari, F., Nazari, A., & Khalili, F. (2023). Examining the Uniformity Model of Received Premium Rates on Innovation in the Financial Management Policies of the Social Security Organization. *International Journal of Innovation Management and Organizational Behavior*, 3(5), 87-92.

<https://doi.org/10.61838/kman.ijimob.3.5.11>



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ABSTRACT

Objective: The aim of the present research is to examine the impact of uniform premium rate models on innovation in policies, reserves, and financial behaviors of the Social Security Organization.

Methodology: The research methodology adopted was mixed qualitative-quantitative. In the qualitative section, the sample consisted of experts familiar with the subject, and through snowball sampling, 20 individuals were determined as the sample size. The population of the current study consists of managers and employees of the General Administration of Tehran Province's districts. The sample size was determined to be 267 individuals, based on Cochran's table and random sampling method. The data collection method in the qualitative part was library and field research, and in the quantitative part, it was field research, which was conducted using a researcher-made questionnaire. The validity of the questionnaire was verified through expert opinions, and Cronbach's alpha method was utilized to assess reliability. For data analysis, grounded theory method was used in the qualitative section, and structural equation modeling and PLS4 software were used in the quantitative section.

Findings: The findings indicated that 37 sub-components were identified for the model, which includes 7 causal factors, 8 contextual factors, 7 intervening factors, 11 strategies, and 4 outcomes. Furthermore, the model fitting results indicate the appropriateness of the proposed model.

Conclusion: This study successfully identified key components and their impacts on the Social Security Organization's financial management policies through a comprehensive mixed-method approach. Notably, strategies significantly influence outcomes, underlining the importance of effective strategic planning and intervention in enhancing organizational performance and achieving desired financial stability and innovation.

Keywords: Insurance, Premium Rate, Uniformity, Innovation, Policies, Reserves, Financial Management, Social Security Organization.

1 Introduction

Currently, the insurance industry is considered one of the most significant economic institutions. Insurance serves a dual role; on one hand, it is a financial institution that plays a crucial role in strengthening the economic foundation of society, and on the other, it creates security and assurance, facilitating the expansion of production and service activities. The progress of insurance is congruent with the country's economic development. The repair of the country's economic situation, increased transactions, improvement in living standards, and investment development lead to the advancement of insurance in that country. Conversely, the progress and dissemination of insurance contribute to the improvement of the citizens' living conditions, the preservation of national wealth, and the formation of significant savings (Mir et al., 2014).

Despite efforts by stakeholders in the insurance industry to develop this sector comprehensively, a gap still exists between the desired state and what has been realized in practice. As part of the insurance industry transformation plan in 2008, efforts were made to steer the industry towards the desired state by creating a competitive environment in the insurance market. Despite the design of strategic plans and appropriate policies in various dimensions, the results indicate that progress towards achieving these goals has been slow and needs acceleration (Nazemi et al., 2021). In a comprehensive welfare and social security system, a set of strategies, programs, and societal activities are considered to maintain the income level of an individual or family, ensuring protection against economic and social issues arising from the discontinuation or reduction of income. Furthermore, efforts to effectively support the workforce are considered characteristics of modern economies (Fallah Kharyeki, 2021; Khamesian & Malekian, 2021; Salehi et al., 2018).

In social insurance, the government, employers, and insured are affected by labor market fluctuations such as wages, minimum wages, unemployment rates, etc., and conversely, the method of financing social insurance impacts the labor market. Financing the Social Security Organization in Iran is based on receiving premiums. Some believe that social security costs add to the labor costs of employers (if wages are not flexible downwards), leading to capital substituting labor, reducing employment, and increasing unemployment. The government has implemented various schemes, including discounts for workshops with up to five people and penalty waivers, aiming to reduce the employer's

share of premiums to increase employment. It is expected that these options will be utilized differently in the future to emerge from unemployment crises. While the implementation of these plans does not show a positive impact on employment increase, the costs of such policies are imposed on the Social Security Fund in the form of reduced revenues (resources) and increased expenditures (costs). An increase in social security costs, along with a decrease in labor demand and real wages, may lead to reduced production but with the payment of retirement pensions, increased purchasing power, and consequently, increased demand, production, and employment will be enhanced (Center, 2020; Fallah Kharyeki, 2021; Salehi et al., 2018).

The issue of social security and the manner of its service provision is an economic and social issue agreed upon by policymakers and statesmen, which, in addition to its social impacts, should also be studied from economic perspectives. Attention to economic theories regarding social security and examining the cost and benefits of government policies in the field of social security can address existing challenges. The concepts of social security are mostly synonymous with social welfare, social assistance, social services, social relief services, or social insurances. Given the breadth of social security concepts, social security services vary across different countries, and each country determines the scope of social support based on its own needs recognition and the ability and payment capacity of the insured (Mir et al., 2014; Salehi et al., 2018).

One of the main objectives of pricing in insurance is to calculate a fair and reasonable rate from the perspective of both the insurer and the insured. Insurers seek a premium that not only covers expected future costs and damages but also provides a suitable amount for desired profits and the possibility of unforeseen events. Accuracy in rate setting, along with experience, are two important factors that must be present from the beginning to the end of the pricing process (Nazemi et al., 2021). From a revenue perspective, the Social Security Organization identifies four main sources of income based on Article (28) of the Social Security Law, which are: 1. Premiums related to wages and salaries, 2. Income from the funds and properties of the organization, 3. Funds from damages and monetary penalties stipulated in this law, 4. Donations and gifts. The Social Security Organization collects premiums related to wages and salaries through payroll lists (which companies submit to the organization monthly). In addition, based on Articles (38) and (41) of the Social Security Law, which aim to supervise

the implementation of the law and the collection of premiums mentioned in Article (28), the Social Security Organization collects premiums through another mechanism known as contractual insurance from private sector participants. Considering the revenue sources of the Social Security Organization and the costs related to retirement, disability, survivors, unemployment, and health insurance, it must be acknowledged that these sources, if the current trend continues for various reasons, will not be able to cover the costs of the Social Security Organization. Among these reasons are the greater growth in the number of pensioners each year compared to the growth in premium payers compared to previous years, increased life expectancy and on the other hand, a decrease in retirement age due to early retirements, claims of the Social Security Organization from the government, and also the low return on investments. Generally, these factors, due to creating an imbalance in the organization's resources and expenditures, cause the Social Security Organization to exert more pressure on businesses contrary to legal procedures (addressing these issues requires the implementation of parametric and structural reforms in the country's social security system); therefore, the present study aimed to examine the uniformity model of received premium rates on policies and financial reserves of the Social Security Organization.

2 Methods and Materials

The current research employed a mixed qualitative-quantitative method. In the qualitative part, we utilized the Grounded Theory method. Grounded Theory is an inductive and exploratory research method that allows researchers in various subject areas to develop their theories instead of relying on existing ones and is also applicable in discovering organizational phenomena. In the qualitative section, the statistical sample consisted of experts familiar with the topic, having at least 10 years of work experience and a postgraduate degree. Through snowball sampling, 20 individuals were determined as the sample size. The study population consisted of 1100 managers and employees of the

General Administration of districts in Tehran Province. The sample size was determined to be 267 individuals, based on Cochran's table and the random sampling method. Data collection in the qualitative part involved library and field research, with the library part reviewing the literature and theoretical foundations of the research, and the field part involving data collection from experts. In the quantitative section, data collection was field-based, utilizing a researcher-made questionnaire scored on a 5-point Likert scale (very low=1, low=2, medium=3, high=4, very high=5). The validity of the questionnaire was verified through expert opinions, and reliability was assessed using Cronbach's alpha method, resulting in an alpha value of 0.818, confirming reliability. For data analysis, the Grounded Theory method was used in the qualitative part, and structural equations and PLS4 software were used in the quantitative part.

3 Findings and Results

As mentioned, to derive the dimensions of the initial model, the Grounded Theory approach was used, identifying categories and subcategories through interviews with experts. Each concept was redefined based on the table above and ultimately identified as a core category, representing subcategories of each category determined and placed in their respective categories, potentially affecting the policies and financial reserves of the Social Security Organization.

For exploratory factor analysis, the principal component analysis method and Varimax rotation were used, identifying 5 dimensions as the model's dimensions along with their subcomponents. These 5 dimensions explain 90.33% of the total variance. The selection criteria for subcomponents, as indicators for factors, were having an eigenvalue greater than one and also a factor loading of 0.70 or higher, provided it appeared less in other factors, ultimately selecting 37 subcomponents. Each of these indicators, related factors, and their factor loadings are displayed in [Table 1](#).

Table 1

Results from Exploratory Factor Analysis

| Factors | Causal | Contextual | Intervening | Strategies | Outcomes |
|------------------------------|--------|------------|-------------|------------|----------|
| Subcomponents | | | | | |
| Method of premium payment | 0.764 | | | | |
| Premium growth | 0.735 | | | | |
| Premium collection rate | 0.793 | | | | |
| Basis of premium calculation | 0.744 | | | | |

| | | | | | |
|--|--------|--------|--------|--------|--------|
| Optimal rate values | 0.784 | | | | |
| Distinction between equality and equity | 0.755 | | | | |
| Application of a fixed increase rate | 0.876 | | | | |
| Duration of insurance benefits entitlement | | 0.765 | | | |
| Number of pensioners | | 0.711 | | | |
| Alignment with years of service | | 0.744 | | | |
| Average premium payment | | 0.790 | | | |
| Implementation of justice in payments | | 0.773 | | | |
| Strengthening the statistical system | | 0.865 | | | |
| Interaction with social partners | | 0.843 | | | |
| Transfer of retirement deductions | | 0.712 | | | |
| Inflation rate | | | 0.764 | | |
| Unemployment rate | | | 0.777 | | |
| National currency purchasing power | | | 0.705 | | |
| Tax exemption | | | 0.815 | | |
| Government's share of premium payments | | | 0.790 | | |
| Government resolutions on price increases | | | 0.792 | | |
| Real wage declaration by employers | | | 0.798 | | |
| Multi-tiered social security system | | | | 0.766 | |
| Organizational capacity and management | | | | 0.743 | |
| Development of fund reserves management | | | | 0.744 | |
| Expanding coverage level | | | | 0.833 | |
| Gradual adjustment of pension entitlement | | | | 0.732 | |
| Retirement age adjustment | | | | 0.762 | |
| Automatic pension adjustment mechanism | | | | 0.769 | |
| Transparent mechanism for pension debt | | | | 0.755 | |
| Improving transparency and accountability | | | | 0.811 | |
| Introducing new social taxes and duties | | | | 0.865 | |
| Reducing the pension entitlement rate | | | | 0.762 | |
| Financial and administrative independence | | | | | 0.833 |
| Preservation of financial resources | | | | | 0.787 |
| Offering retirement services beyond means | | | | | 0.711 |
| Annual pension updates | | | | | 0.803 |
| Initial Eigenvalues Total | 1.24 | 2.16 | 3.90 | 5.34 | 4.67 |
| Percentage of Variance | 12.65% | 21.78% | 34.69% | 54.84% | 35.49% |
| Cumulative Percentage of Variance | 12.65% | 36.56% | 47.67% | 54.84% | 90.33% |

To examine the model's quality, redundancy indices and the determination coefficient are used. Positive numbers indicate a suitable model quality. The main criterion for evaluating the structural model is the determination coefficient, which shows the percentage of variations in the dependent variable explained by the independent variables. The results indicate that 76% of the variations in the policies and financial reserves of the Social Security Organization are predicted by the identified subcomponents of the

uniformity of premium rates. If the redundancy index is greater than zero, observed values are well reconstructed, and the model has predictive capability. In this study, this index for the variables of policies and financial reserves of the Social Security Organization is above zero.

The Bootstrap t-test, with results are described in [Table 2](#). The results show that all obtained coefficients for the model dimensions are positive, indicating that the model is significant and the results obtained can be referenced.

Table 2

Path Coefficients

| Path Coefficients | Beta Coefficient | t-Value | Significance Level |
|-----------------------------------|------------------|---------|--------------------|
| Causal Factors to Core Category | 0.405 | 4.051 | 0.000 |
| Intervening Factors to Strategies | 0.233 | 3.789 | 0.000 |
| Contextual Factors to Strategies | 0.085 | 2.298 | 0.000 |
| Core Category to Strategies | 0.234 | 4.877 | 0.000 |
| Strategies to Outcomes | 0.449 | 4.877 | 0.000 |

Furthermore, for model fitting, fit indices including GFI, AGFI, and RMSEA were used. The obtained values indicate that the model's results are reliable. Both GFI and AGFI indices have been estimated to be above the desired threshold, which is greater than 0.90. Also, the Chi-square to degrees of freedom ratio (X^2/df) has shown an appropriate value. Moreover, the RMSEA error criterion was estimated to be 0.03, which is less than the permissible limit of 0.08. Based on the provided estimates, it can be concluded that the tested model in the targeted population has a relatively good and acceptable fit. Therefore, the results of the research model indicate that the model used in the current study is well-fitted.

4 Discussion and Conclusion

The aim of this research was to examine the uniformity model of received premium rates on innovation in the financial management policies of the Social Security Organization, identifying 37 subcomponents. These include 7 causal factors (methods of premium payment, premium growth, premium collection rate, basis of premium calculation, optimal rate values, distinction between equality and equity, and application of a fixed increase rate), 8 contextual factors (duration of insurance benefits entitlement, number of pensioners, alignment with years of service, average premium payment, implementation of justice in payments, strengthening the statistical and informational system, interaction with social partners, and transfer of retirement deductions to the Social Security Organization), 7 intervening factors (inflation rate, unemployment rate, national currency purchasing power, tax exemptions, government's share of premium payments and government resolutions, Economic Council and Islamic Consultative Assembly based on price and tariff increases, and employers declaring the actual wages of the insured), 11 strategies (multi-tiered social security system, organizational capacity development and management improvement, policies for the development of fund reserves management, policies for expanding coverage level, gradual adjustment of pension entitlement rate to achieve the target replacement rate, retirement age adjustment, automatic pension adjustment mechanism based on the consumer price index, defining a transparent and financially sustainable mechanism for pension debt provision of the current system, improving transparency and accountability in pension fund management, introducing new social taxes and duties, and reducing the pension entitlement rate), and 4 outcomes

(financial and administrative independence, preservation of financial resources for future obligations, offering and committing to retirement services beyond financial capability, and annual pension updates based on individual participation).

These findings align with the research results of Asadiqaragoz et al. (2020) in the implementation of justice in payments, strengthening the statistical and informational system, and Salehi et al. (2017) Nazemi et al. (2020), and Mir et al. (2023) in inflation rate, unemployment rate, and national currency purchasing power (Asadiqaragoz et al., 2020; Mir et al., 2014; Nazemi et al., 2021; Salehi et al., 2018).

Based on the findings, the following recommendations are made:

Provide the necessary groundwork for the gradual implementation of parametric reforms (increasing age and tenure) over a five-year period.

Utilize legal capacities such as Article 50 of the Social Security Law for the collection of private sector's overdue claims.

Form a negotiation committee with the government to establish a mutual understanding of social insurances and their importance.

Analyze the pension funds crisis and the necessity of transfers and persuade them for the transfer of high-yield companies.

Establish a specialized committee in the Social Security Organization to devise various packages for debt bartering.

Expand the scope of the organization's debt bartering (developing a mechanism for bartering the organization's debts with government medical centers and related taxes).

Form a specialized legal and financial team to draft a comprehensive bill for settling the government's debts to insurance funds and insurers.

Gradually eliminate insurance exemptions related to certain workshops, occupations, and specific insured over a five-year process and innovate in creating insurance processes.

Allocate necessary funds from the country's general budget for executing costly projects like pension adjustment or the health transformation plan in the Social Security Organization by the Islamic Consultative Assembly.

Adjust some of the legal limitations on employers for premium payments and overdue insurance claims.

Auction off the organization's unused real estate and invest the financial resources from these transfers in

financially high-yield areas based on modern financial management principles.

Universally increase in-service training hours for employees to reform behavioral approaches towards clients and innovate in their respect.

Develop non-presential services to attract new insured individuals.

Universally expand cultural, social, and communicational activities to attract new insured individuals and reduce insurance evasion.

One of the main limitations of this research relates to the statistical inference section, which, over time and with changes in attitudes and conditions, has undergone minor or significant changes, making it impossible to generalize the results to the future. The results presented are for the current conditions. Furthermore, since the analysis results are derived from employee responses, it is recommended that similar research be conducted using insured individuals' opinions to compare results and offer more solutions from the insured individuals' perspective.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

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Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.