

The Impact Of Annuity Reform On Teachers` Financial Cognition, Financial Planning And Financial Behavior

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Abstract: The purpose of this study is to understand the current situation of primary school teachers' financial cognition, financial planning and financial management behavior after the pension reform in Taiwan. In this study, the obtained data were tested by means of statistical methods such as average, standard deviation, t-test, one-way variability analysis and multiple regression analysis.

The results show that the teachers have relatively low scores on risk perception and sources of information. They also show higher income teachers have higher scores on financial cognition and financial planning; meanwhile, male teachers are higher than female teachers.

It is suggested that future researchers who intend to engage in relevant research should use retirement worries after the pension reform as an intermediary variable to conduct research and increase qualitative interviews to provide teachers with diversified financial information.

Key words: annuity reform, financial cognition, financial planning, financial management behavior.

1 Introduction

For current public school incumbent teachers in Taiwan, the major effects of the annuity reform precede by the government in 2018 lie in the reduction of retirement income replacement ratio and the increase in retirement payment starting age of teachers. According to the latest regulations in the act, the retirement income replacement ratio for the retirement of public school staff members being employed for 15 years annually reduces from 45% down to 30% in 10 years; those with the seniority above 35 years drops the retirement income replacement ratio from the highest 75% down to 60% in 10 years; meanwhile, the minimal benefit amount for the monthly retirement payment is set 33,140 NT dollars.

Such an annuity reform program with “paying more, receiving less, and postponed retirement” passing the burden and pressure of reform on incumbent teachers results in great impact on education, and the major effect lies in the postponed retirement age of teachers. Particularly, decreasing student population reduces the number of classes in past years that specific number of teachers is reduced. Being a teacher is no longer a secure job for people.

They might encounter the dilemmas of being laid off, dismissal, unemployment, no work, and no income, because of low birth rate, and the relevant welfare is also reduced. Annuity reform presents different retirement payment from the past; it is worried that the retirement payment would be lower or even not receiving the retirement payment. Meanwhile, rising price index and aging are reminding teachers of the importance and necessity for early financial planning. Accordingly, this study aims to

1. Understand the mutual correlations among teachers' financial perception and financial planning after annuity reform.
2. Precede regression analysis to explore teachers' financial perception, financial planning, and financial

behavior after annuity reform.

2 Literature review

Generally speaking, money is necessary for each stage of life, including deposit of children funds, purchase of personal property and property asset, and preparation of retirement. Jacob, Hudson, and Bush (2000) considered that financial perception contained checking account balance, credit card management, budget drafting, loan repayment, and insurance purchase. Hogarth and Hilgert (2002) included credit, savings, mortgage, and general financial knowledge. Remund (2010) discovered that financial perception generally contained financial concept related knowledge, financial communication skills, personal financial management characteristics, skills for making proper financial decisions, and confidence in planning future financial needs.

In this study, financial perception is defined as general people's financial ideas and opinions, covering subjective perception, financial planning opinions, financial interest, and risk perception.

In regard to financial planning, Yen & HsuKu (2003) regarded the effects of fund participants' retirement payment debts and fund managers' investment characteristics on the asset allocation strategy of retirement funds. In the discussion of the relevance between savings and financial perception, Mandell (2005) discovered that an extremely thrifty person did not show high financial perception, while people without excessive thrift and consumption presented higher financial perception. In this study, financial planning is measured with four dimensions of financial goal, investment tool selection, information source, and decision factor.

Regarding financial behavior, Garman & Fogue (2000) regarded financial behavior as acquiring the maximal profits with limited resources. Hogarth, Beverly & Hilgert (2003) defined financial behavior as money management and stressed on the discussion of cash flow management, credit management, savings, and investment. Joo (2008) stated that financial behavior contained appropriate measures of various people in financial field; to achieve financial health, an individual had to present actions on cash management, credit and debt management, major event planning in life, and consumption.

In this study, financial behavior is defined as money management, stressing on cash flow management, credit management, savings, and investment. Besides, financial behavior is further divided into "revenue and expenditure management", "risk control", and "investment tool allocation" for the measurement.

3 Research analysis

According to previous literature review, the research framework is developed, expecting to discuss the effect of financial perception and financial planning on financial behavior of elementary school teachers with distinct background, after annuity reform. The following research hypotheses are proposed in this study.

1. Teachers' financial perception and financial planning show correlations with financial behavior after annuity reform.
2. Teachers' financial perception and financial planning reveal significant effects on financial behavior after annuity reform.

The research framework is shown as below.

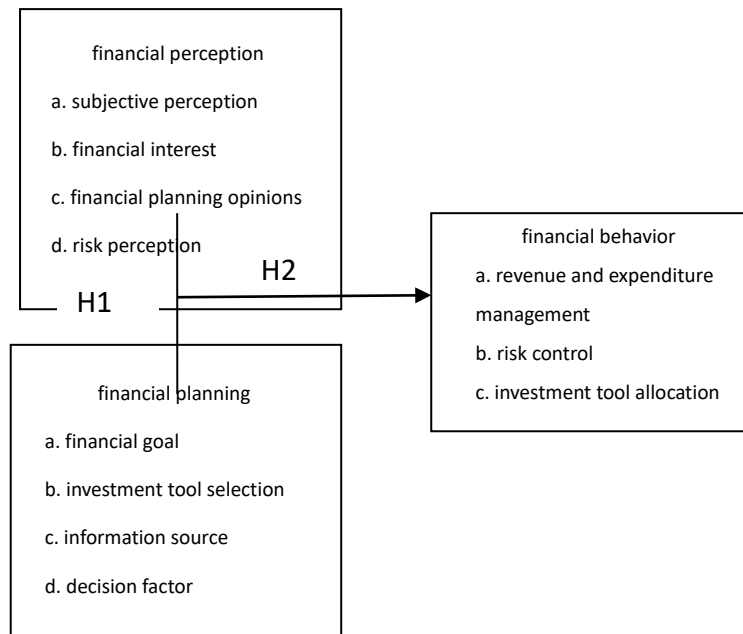


Figure 3-1

3.1 Correlation analysis of financial perception and financial planning

The correlations among financial perception and financial planning are analyzed with Pearson product-moment correlation in this study. From Table 3-1, financial perception presents remarkable correlations with financial planning. “Subjective perception” in financial perception and “information source” in financial planning appear the highest correlation, 0.488. “Financial interest” in financial perception and “decision factor” in financial planning show the highest correlation, 0.228. “Financial planning opinions” in financial perception and “information source” in financial planning reveal the highest correlation, 0.257. “Risk perception” in financial perception and “financial planning total scale” in financial planning present the highest correlation, 0.279. “Financial perception total scale” in financial perception appears the highest correlation with “information source” in financial planning, 0.409.

“Financial goal” in financial planning shows the highest correlation with “financial interest” in financial perception, 0.194. “Investment tool selection” in financial planning reveals the highest correlation with “subjective perception” in financial perception, 0.343. “Information source” in financial planning presents the highest correlation with “subjective perception” in financial perception, 0.488. “Decision factor” in financial planning and “financial perception total scale” in financial perception appear the highest correlation, 0.302. “Financial planning total scale” in financial planning and “subjective perception” in financial perception show the highest correlation, 0.437.

Table 3-1 Correlation between financial perception and financial planning

		financial goal	investment tool selection	information source	decision factor	financial planning total scale
subjective perception	correlation coefficient	0.143	0.343	0.488	0.144	0.437
	significance	0.000**	0.000**	0.000**	0.000**	0.000**
financial interest	correlation coefficient	0.194	0.184	0.091	0.228	0.146
	significance	0.000**	0.000**	0.000**	0.000**	0.000**
financial planning opinions	correlation coefficient	0.130	0.132	0.257	0.207	0.247
	significance	0.000**	0.000**	0.000**	0.000**	0.000**
risk perception	correlation coefficient	0.136	0.104	0.248	0.206	0.279

	significance	0.000**	0.000**	0.000**	0.000**	0.000**
financial perception	correlation coefficient	0.157	0.186	0.409	0.302	0.392
total scale	significance	0.000**	0.000**	0.000**	0.000**	0.000**

*p<.05, **p<.01

3.2 Regression analysis of financial perception, financial planning, and financial behavior

In this section, we use financial behavior, as the dependent variable, and financial perception, financial planning, as the independent variables, are analyzed with Multiple Regression.

From Table 3-2, “subjective perception”, “financial interest”, “risk perception”, “financial goal”, “investment tool selection”, “information source”, and “decision factor” reveal remarkable effects on “financial behavior total scale”, where “subjective perception” appears the most significance. Such variables show positive effects on “financial behavior total scale”, revealing that the higher scores of “subjective perception”, “financial interest”, “risk perception”, “financial goal”, “investment tool selection”, “information source”, and “decision factor” present the higher score on “financial behavior total scale”. The overall decision coefficient is 0.535.

“Subjective perception”, “financial interest”, “risk perception”, and “decision factor” appear notable effects on “revenue and expenditure management”, where “subjective perception” shows the most significance. The four variables positively affect “revenue and expenditure management”, revealing the higher scores of “subjective perception”, “financial interest”, “risk perception”, and “decision factor” show the higher score on “revenue and expenditure management”. The overall decision coefficient appears 0.449.

In terms of “risk control”, four variables of “subjective perception”, “financial planning opinions”, “financial goal”, and “investment tool selection” appear notable effects, where “subjective perception” reveals the most significance. Such four variables positively affect “risk control”, showing the higher scores of “subjective perception”, “financial planning opinions”, “financial goal”, and “investment tool selection” present higher score on “risk control”. The overall decision coefficient is 0.481.

Regarding “investment tool allocation”, six variables of “subjective perception”, “risk perception”, “financial goal”, “investment tool selection”, “information source”, and “decision factor” present significant effects, where “information source” appears the most significance. The six variables positively affect “investment tool allocation”, revealing the higher “subjective perception”, “risk perception”, “financial goal”, “investment tool selection”, “information source”, and “decision factor”, the higher “investment tool allocation”. The decision coefficient shows 0.413.

Table 3-4 Forecasting analysis of elementary school teachers’ financial perception, financial planning, and financial behavior

	revenue and expenditure management	risk control	investment tool allocation	financial behavior total scale
subjective perception	0.528**	0.381**	0.206**	0.465**
financial interest	0.430**	-0.079	-0.065	0.234**
financial planning opinions	0.106	0.128*	0.077	0.045
risk perception	0.108*	0.035	0.217**	0.134**
financial goal	-0.008	0.186**	0.238**	0.166**
investment tool selection	0.094	0.273**	0.296**	0.268**
information source	-0.074	0.022	0.478**	0.180**
decision factor	0.238**	0.075	0.383**	0.261**
R	0.670	0.694	0.643	0.731
R2	0.449	0.481	0.413	0.535

*p<.05, **p<.01

4 Conclusions

This study aims to understand teachers’ financial perception and financial planning after annuity reform and discuss the correlations among financial perception, financial planning, and financial behavior with

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regression analysis. The conclusion, suggestions, and directions for successive research are summarized as followings.

4.1 Correlation among financial perception and financial planning

Financial perception presents remarkable correlations with financial planning, where “subjective perception” in financial perception appears the highest correlation with “information source” in financial planning. Financial perception reveals notable correlations with financial behavior, where “subjective perception” in financial perception presents the highest correlation with “risk control” in financial behavior. Financial planning reveals significant correlations with financial behavior, where “financial planning total scale” in financial planning shows the highest correlation with “risk control” in financial behavior.

4.2 Regression analysis of financial perception, financial planning, and financial behavior

In regard to “financial behavior total scale”, seven variables of “subjective perception”, “financial interest”, “risk perception”, “financial goal”, “investment tool selection”, “information source”, and “decision factor” appear notable effects, where “subjective perception” presents the most significance.

Regarding “revenue and expenditure management”, four variables of “subjective perception”, “financial interest”, “risk perception”, and “decision factor” show significant effects, where “subjective perception” reveals the most significance.

“Subjective perception”, “financial planning opinions”, “financial goal”, and “investment tool selection” reveal remarkable effects on “risk control”, where “subjective perception” appears the most significance.

In terms of “investment tool allocation”, six variables of “subjective perception”, “risk perception”, “financial goal”, “investment tool selection”, “information source”, and “decision factor” present notable effects, where “information source” shows the most significance.

5 Suggestions

According to the conclusion, the following suggestions are proposed in this study.

1. Suggestions for governmental departments

(1) Selecting good investment and financial management institutions and providing correct concepts of financial perception and financial planning, with studies and lectures, for teachers.

The research results show lower scores on financial perception and financial planning of teachers, respectively in “risk perception” and “information source”. There are numerous investment and financial management items with messy information. The government sectors could assist in selecting excellent investment and financial management companies or personnel. With teacher study or lectures, according to teachers’ work and income, correct information could be delivered to help teachers enhance the “risk perception” and “information source”.

(2) Cooperating with suitable investment and financial management units and providing teachers with heterogeneous investment suggestions.

The research results show that teachers with high income present higher scores on financial perception and financial planning, male teachers are higher than female teachers, and number of dependents and education attainment are also the factors in teachers’ financial perception, financial planning, and financial behavior. It reveals that teachers with different background appear distinct financial management. It is therefore suggested that the government sectors, when offering investment suggestions for different teacher groups, should invite cooperated investment and financial management subjects to provide product planning suitable for the income, saving amount, and living demands to meet teachers’ needs as well as enhance the financial perception, financial planning, and financial behavior.

2. Suggestions for school teachers

The research results show inadequate financial perception, planning, and behavior of teachers with lower income and saving amount. Nevertheless, such a group of teachers is the ones with lower seniority or more family expenses. From the viewpoint of annuity, they are the group being more impacted after annuity reform. Teachers therefore are suggested to search for small-amount but relatively stable investment targets to enhance the investment behavior for the future. Furthermore, the enhancement of subjective perception could positively enhance the financial behavior. It is further suggested that teachers could acquire financial knowledge and be acquainted with investment environment and market trend to promote the financial perception.

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