
ATTITUDE OF PEOPLE IN PURCHASE OF PENSION PLANS AMONG PRIVATE SECTOR EMPLOYEES

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Abstract

There is a natural emotional connect when a parent saves for children. However, very few people display the same passion when it comes to their retirement savings. Psychologists say that they do not associate with the person they will be in future, is the main reason for not saving for retirement. But in reality, unlike earlier generations who joined the workforce immediately after graduation at 20 or 21, the demand for higher education has meant the age at which one starts to work is now 25 or more. The non-voluntary reasons like health issues, inability to cope with work pressure and redundancy can also force one to quit working early. The working life is shrinking due to early retirements, both aspirational and forced. Keeping this in mind, this paper is devoted to study the attitude of working community in purchasing pension plans and impact of certain factors like Type of plans, benefits, reliability, security, etc. in their attitude in purchase of pension plans. Samples of 670 employees in Chennai/Sriperumpudur region have been selected for study and information was gathered through a structured questionnaire. The data was analyzed through SPSS software and it revealed that reliability of pension plans and interest on pension plans are the important predictors in discriminating the purchase groups of respondents.

Keywords: *Pension plans, Reliability, Security, Interest, Secured future, Discriminant analysis*

Introduction

Increased longevity creates challenges, not least in relation to pension provision and future sustainability. These challenges have been exacerbated by "under-saving" for retirement. There has been much concern about people not saving enough for retirement in India and how to encourage further saving. This has led to the pension plan development – National Pension Scheme which is slowly gaining importance in the changing scenario. NPS is an attempt by the government to create a pensioned society in India. This paper has investigated the attitude of people in purchase of pension plan among employees working in private sector, as these people do not have job security and the rate of retrenchment being high and in many a case has

undefined pay structure due to the changing business dynamics. Given that young working cohorts have the longest to contribute to pensions and have been least likely to save for retirement, it is important to investigate the attitudes, expectations and focus on the impact of certain variable on purchase of pension plan. Security, in general, can be thought as a peace of mind and freedom from uncertainty, whereas insecurity implies feelings of doubt, fear and apprehension – Tryst with trust.

Need and Importance of the Study

There is no statutory obligation of any employer to make pension payment to his employees. But when an employee retires he no longer gets his salary though his need for a regular income continues. Even the employees who are recruited recently in government services are also deprived of the pension benefit. Retirement benefits like Provident fund and Gratuity are paid in lump sum which are often spent too quickly or not invested prudently with the result that the employee finds himself without regular income in his post retirement days. Pension is therefore an ideal method of retirement provision because the benefit is in the form of regular income throughout his life period and for his family.

The need for the study gains significance because:

1. Dying early was always a problem but living too long is a new dimension added now due to the decline in mortality rate and improvement in living conditions. Hence there is a need for a pension plan.
2. Social disintegration of Joint Hindu Family system has given a wide call for pension plans. Pension is the backbone of the individual who needs economic independence throughout his life.
3. Economic constraints give rise to nucleus and satellite family set up. Besides one must visualize his needs for old age which is altogether different than that for young age (e.g.) housing, medical, recreation, library and welfare measures all under one roof for which he needs economic support. Hence there is need for pension plan.
4. The twin pincers of rising inflation and falling interest rates threaten to squeeze the life out of small savings instruments. One way to break free, then is to invest in long term instruments – mutual funds with higher – than – average maturity periods of government securities with long tenures. Apart from these investment avenues, pension plans offer good returns in later period and tax –saving options.

Sure, these investments won't quite give the adrenaline rush to the high returns that playing the stock market or heavy loss that it might encounter. But these are sail-safe plans that will, slowly but steadily work for a see-through retirement years for both social and welfare measures.

Objectives of the Study

- To find a linear combination of variables (Types of plans, Need of plans, Secured future, Reliability and Security) that discriminate between categories of dependent variable (purchase of pension plan) in the best possible manner.
- To find out which independent variables (Types of plans, Need of plans, Secured future, Reliability and Security) are relatively better in discriminating between groups (purchase of pension plans).
- To determine the statistical significance of the discriminant function and whether any statistical difference exists among groups in terms of predictor variables.
- To evaluate the accuracy of classification, i.e., the percentage of cases that it can classify correctly.

Area Selected for the Study

This study mainly focuses on employees working in private sector organizations in Chennai and Sriperumpudur region to know their attitude towards purchase of pension available in insurance market.

Research Design

The research design used for this study is a combination of descriptive and empirical research. The main purpose of descriptive research is, description of the state of affairs, as it exists at present. The study is said to be empirical due to the application of statistical tools used for data analysis. Data has been analysed with the use of reliability of the study, frequency analysis, cross tabulation and the testing of hypothesis using t-test, ANOVA to arrive on conclusions. The aim of this approach is to portray the employee's level of attitude towards the purchase of pension plans.

Target Population

Target Population for this study has been selected industrial areas of Chennai and Sriperumpudur district in Tamil Nadu state. The reasons for considering these areas are - large number of industries are in these two districts, low literacy level on future plans, low level of savings for future life, low level of living standards, unstructured saving pattern, etc.

Methodology

The study adopts the empirical research design. Empirical research relies on experience or observation alone, often without due regard for system and theory. It is data-based research, coming up with conclusions which are capable of being verified by observation or experiment. It is characterized by the experimenter's control over the variables under study and his deliberate manipulation of one of them to study its effects. Empirical research is appropriate when proof is sought that certain variables affect other variables in some way. Evidence gathered through experiments or

empirical studies is today considered to be the most powerful support possible for a given hypothesis (Kothari, C. R, 2004). For collecting primary data, mall intercept survey technique was used in the study area includes six industrial areas in Chennai and Kanchipuram districts of Tamil Nadu. First-hand information pertaining to awareness, preference and level of satisfaction of respondents in the study area were collected from 670 respondents. The researcher focused to identify the employees' attitude in purchase of pension plans through their awareness, preference and satisfaction on pension plans. The data was collected from the employees in the industrial areas of Chennai and Kanchipuram districts of Tamil Nadu through questionnaire as survey instrument.

Sampling

Stratified random sampling is used as the sampling technique for the research. The employees are working in different industrial areas in Chennai and Kanchipuram districts based on their profile which is called as strata. The approach of random sampling is used in strata to collect independent responses.

A pilot study was conducted among 100 employees in Chennai city. Based on this pilot study, the researcher has arrived at a sample size of 664, on the basis of proportion of employees working in the different areas of Chennai taken for the study in a systematic way and the detailed calculation is given below.

- Proportion of interested respondents (p) = 0.5
- Proportion of dissatisfied respondents (1- p) = 0.5
- Confidence level = 99%
- Margin of error E = 5%
- Z – Value to assure every unit is taken for calculation = 2.576

$$\text{Required sample size } (n_0) = \frac{p \times (1-p) \times z^2}{E^2} = \frac{.5 \times .5 \times 2.576^2}{(.05)^2} = 664$$

As the population size is known and finite, the above sample size can be adjusted through finite population correction faction as

$$n = \frac{n_0 \times N}{n_0 + (N-1)} = \frac{664 \times 131099}{664 + 131098} = 661$$

The sample size is approximated to 660 for the convenience of analysis, to be taken from the population of employees working in Chennai and Kanchipuram districts of Tamil Nadu.

Table 1 Sample Size Estimation

Sl.No.	Region	Approximate Number of Employees (N _i)	Sample Size $n_i = \frac{N_i}{N} \times n$
1	Chennai	53906	$n_1 = \frac{53906}{131099} \times 660 = 271$
2	Kanchipuram	77193	$n_2 = \frac{77193}{131099} \times 660 = 389$

On the basis of the above workings, ten percent more number of questionnaires are issued each in Chennai and Kanchipuram districts to take care of the anticipated invalid responses from the employees. Hence a total of 300 questionnaires in Chennai district and 430 questionnaires were issued in Kanchipuram district and out of these, 33 filled-in questionnaires in Chennai district were found to be inappropriate for use and 27 filled-in questionnaires in Kanchipuram district were found to be invalid at the time of editing the data. Therefore, a sample size of 670 is finalized for the present research work as detailed under:

Table 2 Final Sample Size

Sl.No.	Region	Sample Size
1	Chennai	267
2	Kanchipuram	403
	Total	670

Further, the researcher visited the industrial areas in Chennai such as Ambattur and Padi and randomly picked the employees to gather the information. Similarly, the researcher visited the industrial areas such as Sriperumpudur

and Perungudi in Kanchipuram district and gathered data from the employees in those areas.

Data Analysis

Discriminant Analysis is used to predict group membership. This technique is used to classify individuals/objects into one of the alternative groups on the basis of a set of predictor variables. The dependent variable in discriminant analysis is categorical and on a nominal scale, whereas the independent or predictor variables are either interval or ratio scale in nature. When there are two groups (categories) of dependent variable, we have two-group discriminant analysis and when there are more than two groups, it is a case of multiple discriminant analysis. In case of two-group discriminant analysis, there is one discriminant function, whereas in case of multiple discriminant analysis, the number of functions is one less than the number of groups.

Discriminant analysis was used to classify the objects, i.e, purchase of pension plans into Yes and No and to determine which variables of Benefits of plans, Types of plans,

Need of plans, Secured future, Reliability and Security are the main predictors in discriminating between Yes and No categories of purchase of pension plans.

The following table shows the group statistics which gives the means and standard deviations for both the categories of purchase of pension plans (Yes and No) of different respondents. From this table, few preliminary observations about the groups can be made, and it clearly shows that the two groups are widely separated with respect to all the factors under study. The mean perception on Types of plans is the lowest on both the groups, whereas the mean perception on security is highest on both the groups.

Table 3 Group Statistics

Purchase of pension plans		Mean	Std. Deviation	Valid N (list wise)	
				Unweighted	Weighted
No	Benefits	2.9508	1.25995	519	519
	Types	2.3914	1.23780	519	519
	Interest	3.1553	.51186	519	519
	Need	3.3049	.60781	519	519
	Sec_future	3.4772	.62227	519	519
	Reliability	3.5740	.62528	519	519
	Security	3.8798	.87568	519	519
Yes	Benefits	3.2167	1.27969	151	151
	Types	2.7124	1.25949	151	151
	Interest	3.4339	.56917	151	151
	Need	3.5165	.52664	151	151
	Sec_future	3.7893	.49060	151	151
	Reliability	3.9913	.55468	151	151
	Security	4.0699	.69509	151	151
Total	Benefits	3.0107	1.26836	670	670
	Types	2.4638	1.24900	670	670
	Interest	3.2181	.53765	670	670
	Need	3.3525	.59671	670	670
	Sec_future	3.5475	.60894	670	670
	Reliability	3.6680	.63416	670	670
	Security	3.9226	.84165	670	670

The following table shows test of equality of group means. F statistic determines the variable that should be included in the model and describes that when predictors (independent variables) are considered individually, all the factors significantly differ between two groups. The last column of the following table is the p-value corresponding to the F value and confirms that these variables differ significantly between the two groups at 5% level of significance.

Table 4 Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
Types	.988	7.804	1	668	.005*
Interest	.953	32.900	1	668	.000*
Need	.978	15.016	1	668	.000*
Secured future	.954	32.149	1	668	.000*
Reliability	.924	54.717	1	668	.000*
Security	.991	6.016	1	668	.014**

* significant at 1% level of significance

** significant at 5% level of significance

The following table shows pooled within-group matrices and indicates the degree of correlation between the predictors. It can be seen from the table that the pair of factors Types and Benefits of plans has the highest positive correlation coefficient (.759), followed by Reliability and Security (.516), Reliability and Need (.448), Need and Interest (.416) and Secured Future and Interest (.397). The respondents expressed that the pension plans should be highly reliable and at the same time they should have high security. It can be seen from the table from some variables have moderate correlations among them, and hence discriminant analysis by stepwise method is carried out to take care of the multi-collinearity problem.

Table 5 Correlations among factors

Factors	Benefits	Types	Interest	Need	Secured future	Reliability	Security
Benefits	1.000						
Types	.759	1.000					
Interest	-.120	-.212	1.000				
Secured future	.017	-.038	.397	1.000			
Need	-.180	-.157	.416	.488	1.000		
Reliability	-.081	-.055	.282	.448	.373	1.000	
Security	-.043	.043	.184	.411	.233	.516	1.000

The following table shows Eigen values table, a large eigen value is an indication of a strong function. Four functions were developed by the stepwise method and from the table it can be seen that the function 4 has a eigen value of .881.

Table 6 Wilks' Lambda

Step	Number of Variables	Lambda	df1	df2	df3	Exact F			
						Statistic	df1	df2	Sig.
1	1	.924	1	1	668	54.717	1	668	.000
2	2	.906	2	1	668	34.546	2	667	.000
3	3	.886	3	1	668	28.507	3	666	.000
4	4	.881	4	1	668	22.523	4	665	.000

The following tables 7 and 8 show eigen value and wilks' lambda to verify the significant level of discriminant function. From the table, the chi-square value is found to be 84.615 with the corresponding p-value of .000. This value is significant at 99% confidence level. It indicates that the discriminant function is statistically significant and the overall discriminating power of the discriminant function is good. The eigen value of .881 explaining 100% variance with a canonical correlation of .345, thus explaining about 12% variation in the dependent variable (purchase of plans) by all the independent variables. But, still the discriminant function is significant in explaining the variation even at 1% level of significance.

Table 7 Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.135 ^a	100.0	100.0	.345

a. First 1 canonical discriminant functions were used in the analysis.

Table 8: Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.881	84.615	4	.000

The discriminant equation obtained by the analysis may be written as:

$$D = -7.650 + .370 (\text{Types}) + 1.002 (\text{Interest}) + 1.300 (\text{Reliability}) - 0.320 (\text{Security})$$

The following table shows the classification processing summary table, which is a simple table of the number and percentage of subjects classified correctly and incorrectly. In leave-one-out-classification, the discriminant model is re-estimated as many times as the number of subjects in the sample. Each model leaves one subject and is used to predict that respondent. In other words, each subject in the analysis is classified from the function derived from all cases except itself.

Table 9 Classification Results^{b,c}

		Change	Predicted Group Membership		Total
			No	Yes	
Original	Count	No	510	9	519
		Yes	128	23	151
	%	No	98.3	1.7	100.0
		Yes	84.8	15.2	100.0
Cross-validated ^a	Count	No	508	11	519
		Yes	128	23	151
	%	No	97.9	2.1	100.0
		Yes	84.8	15.2	100.0

a. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

b. 79.6% of original grouped cases correctly classified.

c. 79.3% of cross-validated grouped cases correctly classified.

The diagonal elements of the table represent correct classification. The hit ratio, which is the percentage of cases correctly classified, for this analysis is 79.6%. When the groups are unequal in size, the proportional chance criterion for this analysis is $(.775)^2 + (1-.775)^2 = 0.652$. Thus, the percentage of chance classification is 65.2%. The classification accuracy is 79.3%, which seems to have a good improvement over chance, and the discriminant analysis is judged as satisfactory.

Findings of Study

- The factor Reliability is the most important predictor in discriminating between the willingness to purchase pension plans, and it is followed by Interest and Types of plans. The factor Security has a negative coefficient in predicting the willingness of respondents to purchase pension plans.
- The factors Types and Benefits of plans have the highest positive correlation coefficient, followed by Reliability and Security, Need and Secured Future, Reliability and Secured Future, Need and Interest, and Secured Future and Interest. The respondents expressed that the pension plans should be highly reliable and at the same time they should have high security.
- The factors Reliability of pension plans and Interest on pension plans are the important predictors in discriminating the purchase groups of respondents.
- The higher the perception of people on Types of plans, Interest on plans and Reliability of plans, more is the probability of respondents purchasing pension plans and higher values of Security are likely to result in not purchasing the pension plans.

Conclusion

The preceding discussion highlights the attitude of people in purchase of pension plans and it is clearly evident that the existing systems are passing through a crisis of confidence. With reliability being the most important predictor, the pension funds administered by both public sector and private sector should be backed by Government to bring in more people to invest in pension fund. It is also evident that without reforms in investment policies and performance of pension funds, it will be difficult to provide adequate replacement rate in a sustainable manner for the retirees. Retirement planning being a long-term goal and the investment is for longer period, people prefer to choose a pension product which earns a better interest rate. So people prefer to invest in a simple, flexible, easy to understand, tax efficient & highly liquid investment option. The immediate challenge for India is to design and implement a pension reform strategy capable of restoring the long-run financial viability for public schemes. Equally important, is to provide better returns to private workers through relaxation of investment norms.

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