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A STUDY ON KNOWLEDGE BASED FACTORS INFLUENCING RETIREMENT PLANNING OF INFORMATION TECHNOLOGY EMPLOYEES

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ABSTRACT

Retirement Planning is a journey from known to unknown. It is an exercise which takes a person from where he is to where he wants to be. The entire exercise starts from knowing his or her present financial position, making him/her think how the post retirement survival needs to be and how to grow the wealth to take care of the sunset years. This study primarily focussed on the knowledge related factors and how they influence the retirement planning of Information Technology employees. After the initial pilot study, data was collected from 150 respondents working in Information Technology sector in Bengaluru. KMO and Bartlett's test were conducted to test the sampling adequacy. Exploratory factor analysis was conducted to know the factors influencing the retirement planning. The study recognized two factors under Knowledge – Self-awareness and Appropriateness of financial instruments. This result will be highly useful to the financial advisors while dealing with their clients. Also it may help government and regulatory bodies to device educational programs for the people on retirement planning.

Key Words: Retirement Planning, Information Technology sector, Knowledge, Personal Financial Planning, Factors

1. Introduction

Retirement Planning – How do we arm ourselves for a happy retirement? Experts say "saving money for retirement through one or all of the available retirement planning options is the first place to start". Also, one should ideally begin retirement planning at an early stage in life – preferable from the first job onwards. Taking small steps early, when time is on your side will save you a lot of worry when you are closer to retirement. Also, a young adult who starts investing early in life experiences lower payouts towards investments and gives his/her money more time to multiply. Having money invested early will aid you to build an adequate retirement corpus. However, in many cases it may not be possible for everybody to start investing for retirement early in life due to family commitments, or various other reasons. For such people too, there are ways to increase post-retirement earning potential – like postponing retirement by few years, getting a job to supplement one's pension, avail retirement advances such as reverse mortgage schemes (if one possesses an own house) as the last resort. Most employees have retirement planning options/benefits available through their employees – Employee Provident Fund (EPF), gratuity, superannuation, etc. Such types of retirement options available through the employers are called 'Retirement Benefit Plans'.

2. RELATED WORKS

With the objective of identifying the research gap, a detailed search of literature available was undertaken. In the process, relevant work done by other researchers in the field of retirement planning and associated issues were studied.

(Byrne, 2007) used the data from a survey of the members of a U. K. defined contribution pension plan to explore the attitudes and knowledge of employees faced with pension saving and investment decisions. The results indicated that many employees showed limited interest in their pension plans. All the members have not received any advice with regard to their pension plans, but those who have received mostly, calculated their needs properly, have a high level of knowledge about investments and review their investments actively. The study also revealed that most of them preferred property as their investment avenue which supported the familiarity bias. The results of the study were broadly in consistency with the behavioural economic theory. Even though many don't have broad investment knowledge, they appear to be rational in retirement planning, like they wish to avoid individual stocks and that too, their own employers stock for investments.

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(Chang, Sheu, & Chen, 2010) explored how investors appraised the performance of retirement planning investment policies and the concerned affairs before individual retirement planning investments to develop the critical performance indicators. The indicators can give some references to individuals before making retirement planning investment policies. They built quantitative and qualitative criteria for individual retirement planning investment policy performance evaluation using analytic hierarchy process. Many reasons like change in financial environment, effects of global crisis, fast and uncontrollable market information flow, increasing freedom and internationalization of markets gave rise to the research which investigated and assessed the individual investment performance.

(Gupta & Li, 2004) divided retirement planning into two phases, pre-retirement and post-retirement. On the basis of four inter related models for health evolution, wealth evolution, long term care insurance premium and coverage, and long term care cost structure, a framework for optimal long term care insurance purchase decisions in the pre-retirement stage was developed. The best decisions were obtained by developing a trade-off between post retirement long term care costs and long term care insurance premiums and coverage. Two way branching models were used to model stochastic health events and asset returns. They compared the optimal decision under two insurance purchase scenarios; one assumes that insurance was purchased for good and the other assumed that it may be purchased, relinquished and re-purchased. A detailed sensitivity analysis was also performed for the retirement age. They opine that the level of need and costs of obtained long term care during retired life require that planning for it is an integral part of retirement planning.

(Everett & Anthony, 2003) developed a computerized model of the stages of retirement planning to project the real, inflation-adjusted, after tax retirement income for early, middle and late stages of retirement. This model allowed to estimate how different retirement income distribution strategies affect retirement income, income taxes and residual assets. They illustrated the model with a realistic example of a professional woman working for a multi-national company and nearing an early retirement. The most important findings was that the typical advice to avoid fixed annuities and to defer payments of income tax as along as possible to maximize capital accumulation may not hold for many retirees. They concluded that many individuals approaching retirement have limited knowledge of how to best withdraw their pension, deferred compensation and other retirement assets in an income tax sensitive and risk investment environment.

(Moorthy, et al., 2012) through a cross sectional study did an explanatory research with an intention to establish the relationship between retirement planning behaviour and the various factors affecting the retirement planning behaviour. The objectives were to examine the retirement planning behaviour of working individuals. The study showed that different age group of working individuals have different thinking and behaviour toward the retirement planning among them. The attitude of individuals influences their behaviour in making decision in retirement planning. Their study contributed a clear view through the symbolic interaction theory and several past relevant empirical studies. They identified several significant variables in the prediction of working individuals' retirement planning behaviour, including age, education level and income level. Their findings support the research model in which potential conflict in retirement planning, attitude toward retirement and retirement goal clarity are the significant predictors of retirement planning behaviour.

(Loibl & Hira, 2006) examined the financial learning in the workplace through employer provided, self-directed financial learning media, such as newsletters, print publications, software and the Internet. Independent variables of interest also included an employee's use of family, friends and co-workers as financial planning sources. Their study also addressed whether the use of the personal sources relates to the use of the financial learning media, whether the media utilisation affects an employee's financial knowledge and whether genders influences these relationships. The results of the study indicated that the social network influences utilisation of employer provided financial learning media which in turn increases actual retirement specific and self-reported financial knowledge. They conclude that family, friends, and co-workers do play a role in initiating financial learning and adult financial learning cannot be restricted to class room settings nor does it require a teacher to hand hold. It just requires educational offerings in the workplace for self-directed financial study.

Callahan, Finefrock, & Lahey, (2012) suggested strategies to take care of post retirement survival. The whole idea was to make the money last more than the life of the individual in his spending stage. The suggestions given by the authors were 1. Move away from investment based asset allocation to distribution based asset allocation. 2. More than accumulation strategies, proper distribution strategies go a long way in making enough money for survival. 3. Focus on risk management strategy.

Sacks & Sacks, (2012) studied three different strategies that use home equity for retirement survival. The strategies discussed were 1. After clearing the entire securities portfolio, turn towards reverse mortgage as a last resort. This strategy was termed as conventional strategy. 2. A coordinated strategy where both reverse mortgage and portfolio of securities are used together as per an algorithm. 3. Reverse of passive strategy. Instead of using the portfolios first and going for reverse mortgage later, go for reverse mortgage and then bring in portfolio of securities at the later stage. The results of the study show that reversing the passive strategy pays well. It also states that active strategies deliver higher probabilities when compared with conventional passive strategy.

Klinger (2011) made a detailed study on how to draw assets from retirement portfolio. Eight different strategies were studied by the author using Monte Carlo simulation tools. The initial observation of the studies showed that all the strategies were successful. This resulted in further confusion as to what is the best one. The result of the study was to basically identify the amount of annuity to be purchased and amount to be withdrawn from the remaining portfolio. Further it also states the trade off between retirement income and legacy.

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Millar & Devonish, (2009) through their study concluded that generally, employees lack the basic knowledge to manage their own pension plans and they often times treat issues pertaining to retirement with low priority.

Byrne (2007) in his study noted that all those members of the pension plan based at United Kingdom who received advice, had more knowledge about investments and review them periodically. Most of the members who were surveyed reported that their knowledge is only moderate. The survey got mixed response when the investors were tested on their knowledge about investments. But those who thought that their knowledge level is good have answered the knowledge based questions correctly too.

Benartzi & Thaler, (2007) after doing their research work agree that retirement planning and saving for the same in a complicated issue. They feel employees don't have relevant information or formal training as to how to do retirement planning. Investors go bit passive because of this reason. They require all possible help in understanding the nuances of retirement planning, the advantages of various plans that are available and probably upcoming, the timing of changes and the need for proper diversification. Some of the plans are very cost effective and also simple to do. But unfortunately they are not known to them.

While most of the study done so far dwelled upon different variables, employees of different sectors and environment of different nations, this study aimed at knowing the knowledge based factors influencing the retirement planning of Information Technology employees in India.

3. RESEARCH METHODOLOGY

3.1 Design of the study

This study followed a Descriptive research design which will bring out the Knowledge based characteristics of respondents towards retirement preparedness.

3.2 Statement of the Problem

Retirement planning is a very complicated exercise and unless the factors influencing the same are not identified, the post retirement period will become very difficult to survive.

3.3 Objectives of the study

To find out the knowledge based factors influencing the Retirement Planning of Information Technology sector employees

3.4 Validity

Validity is the accuracy of a measure or the extent to which a score truthfully represents a concept. The questionnaire, which was prepared initially, was sent to fifteen experts in the field of research, statistics and personal financial planning. Valuable feedback given by thirteen experts was incorporated in the revised questionnaire and the same was used for pilot study. Other two experts did not respond due to their busy schedule.

3.5 Pilot study

The revised questionnaire based on the feedback from experts was administered to 20 respondents representing Information Technology sector. The data provided by them was subjected to reliability tests.

3.6 Reliability

Reliability is an indicator of a measure's internal consistency. Cronbach's alpha (α), which is the most commonly applied estimate of a multiple-item scale's reliability was calculated with the data collected through pilot study. The scales reported a Cronbach's alpha of 0.703, indicating fair reliability.

3.7 Sampling procedure

A 46 item questionnaire with ten parts was coined with statements related to Need, Professional help, Importance of time, Knowledge about self, Financial Instruments, Influencing factors, Relevance, Awareness about amount, Source of Advice and Adequacy of savings. The data was collected from 150 respondents on a snowball sampling basis.

The statistical approach of respondent-driven sample size estimation was applied in this study which improves our ability to study hidden populations by allowing researchers to make unbiased estimates of the prevalence of certain traits in these populations (Salganik, 2006). The variables were identified based on the existing literatures and the necessary data was collected using reliable and validated tools. The geographical scope of the study was confined to Bengaluru.

4. ANALYSIS

Knowledge is familiarity with something, or something which can include facts, information, descriptions, or skills acquired through experience or education. It can refer to theoretical or practical understanding of a subject. It can be explicit (through theoretical understanding of a subject) or implicit (acquired through practical skill or expertise). This study focussed on the

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knowledge of Information Technology employees, apart from attitude towards Retirement planning. Knowledge about one's self, financial instruments, influencing factors, relevance, and awareness about amount required for retirement were primarily taken to understand the knowledge of the Information Technology employees. Knowledge about one's self includes how much knowledge one thinks he has about investments and risk. Knowledge about financial instruments primarily checks what the employees know about the appropriateness of different financial instruments ranging from bank deposits to mutual funds to equities. Influencing factors includes price levels, future income and health conditions, government policies and frequent updating of economic developments in the country. Relevance as a dimension focusses on the financial instruments relevant for post-retirement survival, while awareness of amount highlights whether the employees know how to calculate the retirement amount, how often it needs to be reviewed and revised, etc.

Exploratory Factor Analysis:

Initially, inter correlation between variables need to be studied. KMO and Bartlett's test of sphericity were conducted to measure the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test.

Knowledge

Table No. 1 - KMO and Bartlett's test - Knowledge

Kaiser-Meyer-olkin Measure of Sampling Adequacy		.867
Bartlett's Test of Sphericity	Approx. Chi-Square	5430.459
	df	171
	Sig.	.000

Table No. 1 shows the Kaiser – Meyer – Olkin measure of sampling adequacy and Bartlett's test of sphericity. The KMO statistic varies between 0 and 1. A value of 0 indicates that the sum of partial correlations, indicating diffusions, in the pattern of correlation. A value of 1 indicates that patterns of correlation are relatively compact and so factor analysis should yield distinct and reliable factors. Kaiser (1974) recommends accepting values greater than 0.5. Furthermore, values between 0.5 and 0.7 are mediocre and between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and above 0.9 to be superb.

With regard to Knowledge, KMO measure of sampling adequacy comes to 0.867, which falls in the range of superb and so factor analysis is very appropriate for these data.

Bartlett's test of Sphericity: Taking a 95% level of significance, the $p < 0.05$ and therefore the factor analysis is valid. There are several ways to conduct Exploratory factor analysis and choice depends on many issues. This study used Principal Component Analysis.

Table No. 2 shows the communalities before and after extraction. Principal component analysis works on the initial assumption that all variance is common; therefore, before extraction the communalities are all one. The communalities in the column labelled "Extraction" reflects the common variance in the data structure. So, we can say that 70.8% of the variance in knowledge associated with statement one in common or shared, variance.

Table No. 2 - Communalities - Knowledge

	Initial	Extraction
S10	1.000	.708
S11	1.000	.838
S12	1.000	.269
S13	1.000	.372
S14	1.000	.358
S15	1.000	.705
S16	1.000	.593
S18	1.000	.853
S19	1.000	.861
S21	1.000	.592
S27	1.000	.024
S28	1.000	.430
S29	1.000	.762
S30	1.000	.519
S32	1.000	.195
S33	1.000	.817
S34	1.000	.804
S35	1.000	.839
S36	1.000	.435

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Table No. 3 lists the Eigenvalues associated with each linear component (factor) before extraction, after extraction and after rotation. Before extraction, the calculation has identified 19 linear components for Knowledge within the data set. The eigenvalues associated with each factor represent the variance explained by that particular linear component and calculation also displays the eigenvalue in terms of the percentage of variance explained.

When all factors with eigenvalues greater than one gets extracted, Knowledge gives two factors for further study.

Table No.3 - Total Variance Explained - Knowledge

Comp	Initial Eigenvalues			Extraction sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Var	Cum %	Total	% of Var	Cum %	Total	% of Var	Cum %
1	6.487	34.142	34.142	6.487	34.142	34.142	5.822	30.640	30.640
2	4.486	23.610	57.752	4.486	57.752	57.752	5.151	27.112	57.752
3	1.193	6.278	64.030						
4	1.085	5.710	69.740						
5	.960	5.054	74.794						
6	.899	4.733	79.527						
7	.688	3.623	83.150						
8	.552	2.905	86.055						
9	.524	2.757	88.812						
10	.411	2.163	90.975						
11	.393	2.068	93.043						
12	.307	1.617	94.660						
13	.275	1.449	96.109						
14	.176	.926	97.035						
15	.158	.832	97.867						
16	.144	.756	98.623						
17	.128	.673	99.296						
18	.100	.528	99.824						
19	.033	.176	100.000						

Another way to look at these communalities is in terms of the proportion of variance explained by the underlying factors.

Table No. 4 – Rotated Component Matrix – Knowledge

	Component	
	1	2
S19	.923	
S18	.918	
S29	.868	
S15	.840	
S21	.769	
S16	.763	
S30	.718	
S28	.643	
S35		.912
S11		.907
S33		.888
S34		.878
S10		.829
S36		.632
S13		.610

Table No. 4 shows rotated component matrix (also called rotated factor matrix in factor analysis) which is a matrix of the factor loadings for each variable on each factor. Factor loadings less than 0.6 have not been displayed. The variables are listed in the order of size of their factor loadings.

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5. CONCLUSION

This study with 46 item questionnaire collected data from 150 respondents working with various Information Technology companies with the sole objective of knowing the knowledge based factors influencing their retirement planning. Initially, KMO and Bartlett's test were conducted to test the sampling adequacy. Once it proved, exploratory factor analysis was done to identify the factors. This study concluded there are two knowledge related factors influencing the retirement planning of Information Technology employees in Bengaluru city. They are Self-awareness and Appropriateness of financial instruments. This result will be highly useful to the financial advisors while dealing with their clients. Also it may help government and regulatory bodies to device educational programs for the people on retirement planning.

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