Gender Bias in Financial Planning for Retirement#

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Abstract

Socio-economic factor, family structure has impact on the various facets of economy as well as individual's life, specifically after retirement. In the past, primarily India had joint family structure or a compound family structure, which was a great source of support after retirement. Today India's population is growing but average family size is reducing. This phenomenon translates into more retired people per working individual. If pretired individuals are financially secure, their hardships of old age can be reduced to a large extent. Per capita income today, is far greater as compared to past with many more investment avenues to suit ones requirement. Financial plan is required to satisfy financial needs at various stages of life. Income after retirement is consequence of the investments made during work life, which is the result of the financial plan for retirement. The census data indicates life expectancy for women is higher than men. Hence, it is important that women make financial planning for their financial needs after retirement. Financial literacy, savings and clarity of objectives are positively related to financial planning by the individuals. The data for the study is collected using Google Forms from the individuals employed in ITES sector in the city of Bengaluru. Logistic regression model is used to evaluate variance in the financial planning for retirement due to explanatory factors, 'clarity of financial goal', 'attitude towards savings' and 'financial literacy' on 'financial planning for retirement. Independent t test is used to evaluate difference between men and women. The study revealed that explanatory variables had influence on the financial planning for retirement and t test revealed that men and women do not differ in their behavior.

Keywords: Attitude towards Savings, Clarity of Goals, Financial Goals, Financial Planning
JEL Classification: D14, D19, E21

1. Introduction

Financial planning for retirement is important for an individual and also for the country's economic stability. Expected life of an individual is getting enhanced as result of better lifestyle and medical facilities. Life expectancy for male is 69.37 years and for female it is 72.66 years (National Commission on Population, 2020). The life span after retirement, considering 60 years as retirement age, is 10 years for male and 13 years for females. Thus making financial plan to provide for the non-earning years is essential. Here we need to note that women need to plan for longer period than men. India has multiple pension scheme, all of them are defined contribution schemes. Central government employees had defined benefit pension scheme which was discontinued from 2004. Now, with exception of defence sector, all pension schemes are based on defined contribution plan. In India traditionally individuals used to depend on their family for financial and social support. Family structure in India has gradually shifted from joint-family to nuclear

family structure. This phenomenon has had significant impact on the life after retirement as individual do not have financial and social support from the family.

India is young country with median age 28.34 years with 64.2 per cent individuals are from working age group (National Commission on Population, 2020). These individuals need to make financial planning for retirement during their work age, if they fail to do so, India would be staring at economic disaster in times to come. It is important to understand this young population's behaviour towards retirement planning. The study assesses the association of demographic factors with financial retirement planning and analyses relationship between financial planning for retirement and psychological variables. Further study evaluates if there is difference between men and women with respect to demographic factors and psychological factors.

The study has considered individuals employed in ITES sector. ITES sector contributes 8 per cent to GDP in 2020 (IBEF, 2021). India's export growth rate from ITES sector, as per Ministry of Electronics and Information Technology (2021), is 10.49% CAGR (2013-18). It provides direct employment to almost 4 million individuals. Individuals working in this sector are well educated and are comfortable with digital technology in their daily life.

2. Literature Review

Individuals have a plan for the income earned by them. Broadly, this plan has two dimensions; they are 'expenditure' and 'savings'. Multiple factors influence the decisions regarding 'expenditure' and 'savings'. In case of savings individual faces three challenges; first, how much to save, second, challenge is how to allocate funds to various assets and the third challenge is how to estimate potential return on the investments (Mulvey and Vladimirou, 1992). All these questions can find solution if an individual has clarity of objectives for saving. This clarity in objectives can help him/her to seek the right information to allocate savings to various financial assets. Clarity of objectives is enabler to make better financial planning (Nevins,

2004; Stawski et al., 2007). Clarity of objectives helps an individual to predict money required to fulfil needs and desires which logically leads an individual to make financial strategies to match demand and supply of money. Making of financial plan is the result of clarity of objectives and financial plan for retirement is subset of overall financial plan. In other words clarity of objectives acts as a motivator for financial plan for retirement (Hershey et al., 2007). Clarity of objectives also makes individual more risk tolerant as he/she is inspired to achieve the goal (Cai and Yang, 2012).

Financial literacy, as per Lusardi and Mitchell is the knowledge of fundamental financial concepts and the ability to do simple financial calculations (Lusardi and Mitchell, 2011). Financial literacy helps to understand the concepts such as inflation, compounding, risk and diversification. Financial literacy, hence acts as motivator to make good financial plan. The study conducted by Agarwal et al., in Hyderabad found that there is positive correlation between financial planning and financial literacy (Agarwal et al., 2015). Financial literacy is required for understanding financial information to make decision regarding finance (Lusardi, 2019). Subjective financial literacy is also the measure of confidence in making financial decisions to achieve financial wellbeing after retirement (Adam et. al., 2017; Hauff et. al., 2020). As per empirical study in Germany, there is causal relationship between financial literacy and financial planning for retirement (Bucher-Koenen et. al., 2011).

Demographic variables also have relevance in financial planning for retirement. Studies conducted in Malaysia shows that age, education, gender and income has influence over retirement planning (Mansoor et al., 2015; Kaur et al., 2018). Other studies have also found association of marriage, age and income with financial planning for retirement (Su et al., 1997; Ng et al., 2011). Studies undertaken to understand if there is variation in demographic factors based on gender. The study conducted by Lusardi and Mitchell in US observed that women had lower financial literacy and they were less likely to plan for retirement (Lusardi and Mitchell, 2008). The difference stems from socioeconomic factors, such as education, income, occupation, marital

status. Women face career breaks and this aspect has influence on goal clarity, financial planning, financial literacy, income (Glass Jr. et al., 1998; Hershey et al., 2007). Women tend to select low paying jobs, with career breaks and lower incomes results in lower goal clarity which leads to dominos effect and results in difference between men and women with respect to saving attitude and financial literacy (Agarwal et al., 2015; Lusardi, 2019; Rai et al., 2019; Baker et al., 2019; Nolan and Doorley, 2019).

3. Objectives

- To evaluate the association between demographic factors and financial planning for retirement.
- To understand relationship between subjective financial literacy, attitude towards saving, clarity of objectives and financial planning for retirement.
- To assess if men and women differ in subjective financial literacy, attitude towards saving, clarity of objectives and demographic observations.

4. Research Methodology

For the study individuals working in the ITES sector in the city of Bengaluru were selected. Hence the sampling frame is all the individuals working in the ITES sector. There are approximately 4.4 million individuals are employed in this sector. The plan was to visit software technology parks to collect the data. Due to pandemic most of the employees are working from home. Hence snowball sampling method was used to select the respondents. Structured questionnaire was developed to collect the primary data. The data was collected through Google Forms. The link for the questionnaire was sent to 392 individuals, out of these 304 individuals filled the questionnaire. The questionnaire had two parts, first part covered demographic factors and second part had twenty one items. Financial literacy had 13 items, clarity of objectives and attitude towards saving had 4 items each. Five point likert scales was used to collect respondents opinion on various items. To check the internal consistency of the items in the construct, cronbach's alpha is calculated and to check unidimensionality of the constructs factor analysis was carried out. To capture status of financial planning for

retirement, respondent had to choose one option out of four, indicating current level of financial planning for retirement. These four options ranged from 'Not yet' started to make financial plan, to 'Planning for Long Time' for retirement.

Chi square test was used to evaluate association between demographic factors and financial planning for retirement. Logistic regression analysis was used to assess the relationship between criterion and explanatory variables. Independent t test was used to evaluate gender difference in respect of financial literacy, attitude towards saving, clarity of objectives and demographic variables.

5. Analysis and Discussion

Table 1 gives the profile of the respondents. Large proportion of the respondents are below 30 years of age (61.8%) and 55% of the respondents are men. Almost 92% of the respondents have completed education up to the level of graduation and above. 44% of the respondents are married. 65% of the respondent's annual income is below 15 lakhs. Majority (61%) of the respondents save regularly. We can summarise the

Table 1. Demographic profile of the respondents

Variables		Frequency	Percent
Age	Less than 30 years	188	61.8
	31 to 40 years	90	29.6
	Above 41 years	26	8.6
Gender	Male	166	54.6
	Female	138	45.4
Education	Diploma	24	7.9
	Graduate	152	50.0
	Postgraduate and above	128	42.1
Marital Status	Married	133	43.8
	Unmarried	171	56.2
Family Income	Less than 10 lakhs	118	38.8
	10 to 15 Lakhs	80	26.3
	15 to 20 lakhs	50	16.4
	Above 20 lakhs	56	18.4
Saving Habit	Save Regularly	185	60.9
	Do Not Save Regularly	103	33.9
	Do Not Save	16	5.3

profile of the respondents as young, well-educated and save regularly a part of their income.

5.1 Cronbach's Alpha

Cronbach's alpha measures the internal consistency of the items in the construct. In case of social science studies, value greater than 0.70 is considered acceptable. All the constructs have value greater than the threshold value of 0.70 (Table 2).

5.2 Factor Analysis

Kaiser-Meyer-Olkin Measure of Sampling Adequacy value should be greater than 0.60. Here KMO value is 0.934. Bartlett's Test of Sphericity has significance value of 0.000, It means correlation matrix is not identity matrix and hence suitable for factor analysis (Table 3).

Table 2. Cronbach's Alpha

Factor	Items	Cronbach's Alpha
Subjective Financial Literacy (Sub-FL)	13	0.844
Attitude Towards Saving (ATS)	4	0.802
Clarity of Objectives (CO)	4	0.959

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.934
Bartlett's Test of Sphericity	Approx. Chi-Square	4.794E3
	df	210
	Sig.	.000
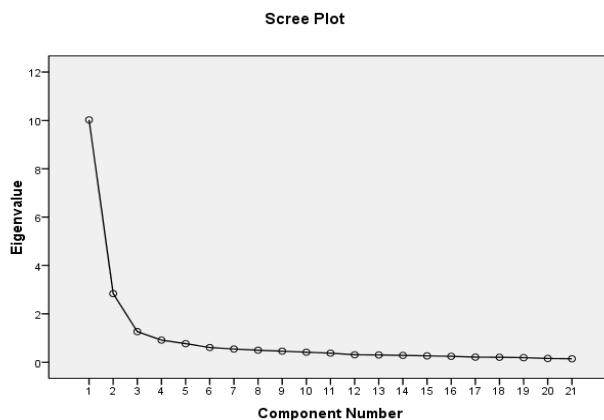
Graph 1. Scree plot.

As indicated in 'Total Variance Explained' (Table 4), three factors emerge. Three factors explain 67.256 per cent of variance in the dependent variable. Rotated matrix (Table 5) and scree plot (Graph 1) shows three factors whose Eigen values are greater than one. These three factors cumulatively explain 67.26% of variance. The total variance explained by the factors should be more than 60%. Hence we can assume that scale items are unidimensional.

5.3 Ordinal Logistic Regression (OLR) Analysis

Table 6 contains 'Model Fitting Information'. There is improvement from only intercept model to a model with all independent variables. The Chi-square value is 29.383 and it is significant at 5%. It means this model is good model fit.

Goodness-of-fit (Table 7) test indicates if the model is good fit. Deviane Chi-square value is 658.807 and it is insignificant. Hence we can conclude that the model is good fit.

Psudo R-square (Table 8) is compared to R-square in ordinary regression analysis,

Table 9 gives the estimate for the independent variables. All independent variables are positively associated with the dependent variable

Table 10 gives result of the chi-square test. All the demographic variable's association with financial planning for retirement is significant at 5%. Hence we conclude that there is association between demographic variables and financial planning for retirement.

Table 11 gives result of independent t test. Independent t test was used to analyse of there is difference in variables with respect to gender. t value is not significant for all the variables except for the variable 'age'. Hence we can conclude that there is no difference in male and female with respect to financial literacy, clarity of objectives, attitude towards savings and all the demographic variables except age.

Table 4. Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.022	47.722	47.722	10.022	47.722	47.722	8.507	40.510	40.510
2	2.837	13.509	61.231	2.837	13.509	61.231	2.895	13.787	54.297
3	1.265	6.024	67.256	1.265	6.024	67.256	2.721	12.958	67.256
4	.913	4.349	71.605						
5	.767	3.653	75.258						
6	.609	2.902	78.160						
7	.547	2.605	80.765						
8	.497	2.365	83.130						
9	.458	2.183	85.313						
10	.413	1.967	87.280						
11	.374	1.782	89.062						
12	.307	1.463	90.525						
13	.301	1.432	91.957						
14	.282	1.345	93.302						
15	.261	1.244	94.546						
16	.244	1.162	95.708						
17	.210	.999	96.706						
18	.205	.975	97.682						
19	.189	.899	98.580						
20	.155	.736	99.316						
21	.144	.684	100.000						
Extraction Method: Principal Component Analysis.									

Table 5. Rotated component matrix

	Component		
	1	2	3
Sub-FL_1	.743		
Sub-FL_2	.774		
Sub-FL_3	.746		
Sub-FL_4	.813		
Sub-FL_5	.828		
Sub-FL_6	.785		
Sub-FL_7	.768		
Sub-FL_8	.805		
Sub-FL_9	.858		
Sub-FL_10	.834		
Sub-FL_11	.755		
Sub-FL_12	.818		
Sub-FL_13	.779		
ATS-1		.792	
ATS-2		.831	
ATS-4		.736	
ATS-5		.825	
CO_1			.702
CO_2			.768
CO_4			.674
CO_6			.746

Table 6. Model fitting information

-2Log Likelihood	Chi-Square	df.	Sig.
725.452			
696.069	29.383	3	.000

Table 7. Goodness-of-fit

-2Log Likelihood	Chi-Square	df.	Sig.
Pearson	816.466	687	.000
Deviance	658.807	687	.774

Table 8. Pseudo R-square

Cox and Snell	.094
Nagelkerke	.101
McFadden	.038

6. Conclusion

The study reveals that explanatory factors; subjective financial literacy, attitude towards savings and clarity of objectives explain variance in dependent variable

Table 9. Parameter estimates

		Estimate	Std. Error	Wald	df	Sig.
Threshold	Not Yet	2.631	.637	17.083	1	.000
	In Process to get information	3.523	.651	29.294	1	.000
	Started to Save for Retirement	4.946	.678	53.188	1	.000
Location	Sub-FL	.515	.158	10.568	1	.001***
	Clarity of Objectives	.303	.188	2.589	1	.108
	Attitude towards Savings	.092	.151	.369	1	.544

***significant at 1%

Table 10. Chi square Association between Financial Planning for Retirement and Demographic factors

Demographic Factor	Pearson Chi-Square Value	df	Significance (2-sided)
Age	87.183	6	.001**
Gender	11.374	3	.100*
Education	27.127	6	.001**
Marital status	38.801	3	.001**
Family Income	67.090	9	.001**
Saving Habit	25.493	6	.001**

*significant at 10%, **Significant at 5%

Table 11. Independent t Test for gender bias

Variable		Mean	t value	Significance	Mean Difference
Subjective Financial Literacy	Male	3.2544	1.275	.203	.1217378
	Female	3.1326			
Attitude Towards Saving	Male	3.5542	-1.800	.073	-.16861
	Female	3.7228			
Clarity of Objectives	Male	3.3148	-.594	.553	-.05118
	Female	3.3659			
Age	Male	1.64	5.413	.000***	.378
	Female	1.26			
Education	Male	2.39	1.535	.126	.109
	Female	2.28			
Marital Status	Male	1.51	-1.956	.051	-.111
	Female	1.62			
Income	Male	2.22	1.32	.186	.172
	Female	2.05			
Saving Habit	Male	1.48	1.221	.223	.083
	Female	1.40			

***significant at 1%

i.e., 'current status of financial plan for retirement'. This outcome matches with the earlier studies (Nevins D, 2004; Stawski et al., 2007; Hershey D A, et al., 2007; Lusardi and Mitchell, 2011; Cai and Yang, 2012; Agarwal et al., 2015). There is significant association between demographic variables and dependent variable, 'financial planning for retirement'. This outcome also in agreement with earlier studies (Mansoor et al., 2015; Kaur et al., 2018; Su et al., 1997; Ng et al., 2011). The literature points out that there is difference in financial literacy, clarity of objectives, education and income between men and woman (Lusardi and Mitchell, 2008; Glass Jr, et al., 1998; Hershey et al., 2007; Agarwal et al., 2015; Lusardi A, 2019; Rai K et al., 2019; Baker et al., 2019; Nolan and Doorley, 2019). The findings of the study are contrary to earlier studies. This paper contributes to the literature on financial planning for retirement. This study indicates that men and women in ITES sector do not differ on demographic variables and psychological variables.

7. Scope for further study

Further study can be taken up to evaluate gender bias in investment pattern for retirement. Study can also be taken up in other sectors like manufacturing sector, pharmaceutical sector, and hospitality sector to assess gender bias in investment behaviour. Comparative study can be taken up among multiple sectors regarding financial planning. The present study can be enhanced by considering additional behavioural variables.

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