

**Catalysts and consequences of investment in selected avenues**Karthika P Devan<sup>1</sup>, Mishel Elizabeth Jacob<sup>2</sup>&Shamini T. V.<sup>2</sup>

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**Abstract**

The study on the investment behaviour of school teachers helped in understanding their attitude towards investments. The Indian economy is growing significantly and the financial market provides ample opportunities for investors to invest. Primary data was collected from a sample of 382 school teachers belonging to the government, aided and unaided sectors using a pretested structured questionnaire. The scaling technique utilized for the study is five point Likert scales. The attitude towards investment was analyzed using SEM regression. It shows that investment experience, self regulation, investor involvement, motivation, goal setting and revision, information processing style, familiarity, and risk capability have a significant impact on investment attitude, with regression coefficient value more than 0.4. The results of SEM regression shows that all the constructs -service quality, grievance redressal, risk and return and overall performance- has significant impact on satisfaction.

**1. Introduction**

The economic growth over the past years has led to substantial creation of wealth, which has led to a rise in the income levels across households in India. The household sector contributes a lion's share of the total saving which needs to be stepped up. Savings from all quarters are the need of the hour. Assured income encourages salaried class to be regular savers. Fixed income groups can contribute more on investment.

India has made phenomenal progress since independence in the field of education and has one of the largest and complex school education systems in the world along with China. Among the states, Kerala leads the literacy rate followed by Goa, Tripura, Mizoram, Himachal Pradesh, Maharashtra, and Sikkim. The lowest literacy rate in India is seen in the state of Bihar. India has seen a dramatic increase in the literacy rates over the past decade, when it was registered as 64.83 per cent overall.

Macro level studies confirm the role of the salaried class investors in providing the financial resources to the industrial sector. The salaried middle-class people are the unique group of individuals, who is forever short of resources, has deep-rooted self-created ethical and moral boundaries, has sky-high ambitions but is constrained by numerous feasibility issues, has tax problems, etc. Education is concerned as a powerful agency which is

instrumental in bringing about the desired changes in the social and cultural life of a nation. To build a nation, teachers play a crucial role through education. Furthermore, they also contribute a part of their savings for economic growth. Taking the total number of teachers in the state, the total saving by this group is a considerable amount. However, majority of them are not quite familiar with, or are not aware of many of the financial investment options which have emerged in the recent past. Many of them are risk averse and do not take risky avenues. Majority of them still continue in the traditional channels of investment such as fixed deposits, chit funds, post office savings, and provident funds etc.

The surplus of information regarding the numerous investment alternatives has led to more complexity in financial decision-making, as the financial consumers are not fully equipped to evaluate the available information (Pradhan, 2008). Also, it has been seen that many investors have little or no formal education in finance (Chikermane, 2006; Chidambaram, 2007; Pradhan, 2008). Hence, effectively analyzing information is becoming very difficult for the individual investor (Pradhan, 2008; Sahi, 2009). This is a more serious concern as more and more people are taking personal control over their financial planning and without the knowhow or the proper guidance on the most suitable investment options, the individual may be unable to achieve their financial goals, which would lead to a decrease in their financial satisfaction.

Teaching is the one the most popular profession across the globe. Various studies on teachers have revealed that they have good financial and saving behaviour (Ramli, Sum, Lyndon, Manaf, Selvadurai & Saad, 2012; Sood & Kaur 2015). Hence, the study focus on analyse the attitude towards and satisfaction of school teachers from investment in different investment options.

## **2. A brief Literature Review**

To study the attitude towards and satisfaction of school teachers from investment in different investment options remain an area of extensive research. Mittal and Vyas (2011) analysed variables such as preference for risk, investment choice, information processing style, overconfidence, information accumulation efforts to study the gender differences in investment behaviour and suggest that men and women do not differ in their information processing and accumulation styles.

Achar (2012) in his study titled “An analysis of behaviour of teaching community towards saving & investment” is undertaken to analyse the saving & investment patterns of primary, high school, college and university teachers. The individual characteristics of teachers such as

age, gender, marital status, and lifestyle determined the savings and investment behaviour of teaching community. Visalakshi and Srividhya (2013) analysed the savings and investments pattern among the college teachers both in Pondicherry and Tamilnadu states. Majority of the respondents feel the best avenue for investment is in deposits and it is helpful to manage the unpredictable future.

Sood and Kaur (2015) in their study titled “A study of saving and investment pattern of salaried class people with special reference to Chandigarh, India” concluded that most of the teachers prefer Bank F.D and Govt. Securities as the investment option since there is lack of awareness about other avenues like equity, and mutual fund etc. Mouna & Anisa (2017) identified it is based on the two experimental variables as financial literacy and stock holdings and the predictors are economic education and daily use of economics. The finding shows financial literacy affects the stock market participation. Princey Caroline (2018) in this paper an attempt has been made to find the influence of behavioral factors towards investments. A structured questionnaire was used to collect data from 527 respondents in Coimbatore city. Factor was used to identify the most influencing behavioral factors in deciding about the investments. Study revealed that Family, Friends, sources of information and annual income of an individual to a large extent influence the individuals.

### **3. Data and Methodology**

The study focus on analyse the attitude towards and satisfaction of school teachers from investment in different investment options. A multi stage random sampling design was adopted. These schools were classified into small, medium and large on the basis of the number of teachers working. The schools with less than 10 teachers are considered as small, schools with teachers between 11-30 are classified as medium and those with above 30 teachers are classified as large schools. From the population 25 percent of teachers were selected at random using lottery method. Thus, there were 62 teachers from the small category, 136 teachers from the medium category and 184 teachers from the large category which totaled to 382 samples.

#### **3.1 Tools and Techniques used for Analysis**

KMO and Bartlett's tests measure varies between 0 and 1 and values closer to 1 are better. According to Kaiser (1974) values greater than 0.5 are acceptable. Here KMO for variables determining the investment behavior are greater than  $>0.6$  and it is clear that the KMO values of all the variables are satisfied for factor analysis. Furthermore, most of the values belong to

the category of 'good' with values greater than 0.7, so it should be confident that factor analysis is appropriate for the data. Bartlett's test of sphericity tests the null hypotheses that the correlation matrix is an identity matrix but here the correlation matrix is not an identity matrix and hence the null hypothesis is rejected. The obtained Chi-Square value is significant at .000 levels. Thus, Bartlett's test seems to be appropriate.

Attitude means a state of mind or feeling with regard to some matter. It is true that saving and investment of money has direct bearing on one's behaviour and attitude. To examine the factors which determine the attitude of the school teachers towards investments, Structural Equation Modelling (SEM) is being used. This technique is chosen for its ability to examine a series of dependence relationships simultaneously, especially where there are direct and indirect effects among the constructs within the model.

SEM is a statistical technique that takes a confirmatory approach to the analysis of a structural theory bearing on some phenomenon. SEM conveys two important aspects of the procedures: a) causal process under study is represented by a series of structural (regression) equations, and b) these structural relationships can be modeled to facilitate a clearer conceptualization of the theory under study. The hypothesized model is statistically tested simultaneously to examine its consistency with the data through goodness of fit measures.

Confirmatory factor analysis (CFA) is a type of structural equation modelling, which deals specifically with measurement models, that is relationship between observed measures or indicators and the latent variables or factors. A fundamental feature of CFA is its hypothesis – driven nature. In CFA, the researcher specifies the number of factors and the pattern of indicator factor loading in advance, thus the researcher must have a firm prior sense, based on past evidence and theory of the factors that exist in the data. CFA is used for four major purposes 1) psychometric evaluation of measures (questionnaires) 2) construct validation 3) testing method effects and 4) testing measurement invariance (across groups or population).

#### **4. Results and Discussions**

The results of statistical analysis carried out based on the primary data collected from the respondents, analyzed with the objectives of the study. The prime objective is to measure attitude towards investment and satisfaction from investment. The respondents were asked 17 questions regarding attitude towards investment using five point Likert scale and these constructs were named as A1 to A17 and are listed in Table 2.

##### **4.1 Analysis of attitude towards investment**

Here, SEM is used to test the hypothesis:

**H<sub>0</sub>:** Constructs A1 to A17 do not determine the attitude of the school teachers towards investments.

**H<sub>1</sub>:** Constructs A1 to A17 determines the attitude of the school teachers towards investments.

In the SEM we start with an initial model and refined to reach the final model. The model fit indices are presented in Table 1.

**Table 1 Model fit Indices for CFA Attitude towards investments**

	$\chi^2$	DF	P	Normed $\chi^2$	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Attitude	172.510	78	.000	2.212	.953	.909	.933	.932	.961	.049	.056

(Source: Survey Data)

The measures of “goodness of fit’ followed in this research are:

Absolute fit measures: Likelihood ratio Chi-square statistic (p): usually greater than 0.05 or 0.01 is the level of acceptable fit. Goodness of fit index (GFI): higher values closure to 1.0, indicates better fit. Root mean square error of approximation (RMSEA): values ranging from .05 to 0.08 are acceptable. Root mean square residual: smaller values are better.

Incremental fit measures: Tucker-Lewis Index (TLI): A recommended value of TLI is 0.9 or greater. The value closure to 1.0 indicates perfect fit. Normal fit Index (NFI): A recommended value of NFI is 0.9 or greater. The value closure to 1.0 indicates perfect fit. Adjusted goodness –of –fit index (AGFI): A recommended value of AGFI is 0.9 or greater. The value closure to 1.0 indicates perfect fit.

All the attributes loaded significantly on the latent constructs. The value of the fit indices indicates a reasonable fit of the measurement model with data.

**Table 2 Regression coefficients for attitude towards investments**

Factors(Dependent Variable)-	Construct (Independent Variable)	Regression Coefficient	C.R.	P	Variance explained (%)	Cronbach Alpha coefficient before	
						Before	After
A1	Investment skill.	0.280			7.8	0.717	0.778
A2	Investment experience	0.483	6.119	<0.001	23.3		
A3	Self regulation	0.403	4.969	<0.001	16.2		
A4	Investor involvement	0.577	4.511	<0.001	33.3		

A5	Product knowledge.	0.202	2.976	0.003	4.1
A6	Confidence	0.377	3.980	<0.001	14.2
A7	Responsibility taking	0.383	4.087	<0.001	14.7
A8	Motivation	0.459	4.390	<0.001	21.0
A9	Learning attitude	0.348	4.243	<0.001	12.1
A10	Goal setting and revision	0.442	4.496	<0.001	19.5
A11	Information processing style	0.576	4.739	<0.001	33.1
A12	Familiarity	0.698	4.693	<0.001	48.7
A13	Risk capability	0.460	4.289	<0.001	21.2
A14	Technology	0.329	3.849	<0.001	10.8
A15	Market information	0.132	2.064	0.039	1.7
A16	Role of financial advisors	0.083	1.448	0.148	0.7
A17	Stress management capability	0.339	3.689	<0.001	11.5

The validity of the hypothesis was assessed by examining the regression coefficients of extracted constructs. If the regression coefficient has value more than 0.4 it is treated as having significant impact on dependent variable. Investment experience, self regulation, investor involvement, motivation, goal setting and revision, information processing style, familiarity, risk capability has regression coefficient value more than 0.4 and therefore have a significant impact on investment attitude. The factors with regression coefficient value less than 0.4 such as investment skill, product knowledge, confidence, responsibility taking, learning attitude, technology, market information, financial advisors, stress management does not have any significant impact on dependent variable, that is investment attitude.

For the analysis an input model was developed, the rectangle represents observed factors from A1 to A17, ovals in the diagram represents unobserved variable e1 to e17. The curved double headed arrows represent correlations or co-variances among the unobserved variables and the straight headed arrow represents the factor loadings of the observed variables. The small circles with arrows pointing from the circles to the observed variables represent errors /unique factors, which are also known as, squared multiple correlation of the standard error.

**4.2 Analysis of Satisfaction from Investments**

To examine the factors which determine the satisfaction of the school teachers towards investments, structural equation modeling is being used. This technique is chosen for its ability to examine a series of dependence relationships simultaneously, especially where there are direct and indirect effects among the constructs within the model. SEM estimation procedure used is maximum likelihood estimation. The following hypotheses were tested.

**H<sub>0</sub>:** Constructs S1 to S4 does not determine the satisfaction of the school teachers towards investments.

**H<sub>1</sub>:** Constructs S1 to S4 determine the satisfaction of the school teachers towards investments.

**Table 3 Model fit Indices for CFA Satisfaction from investment**

	$\chi^2$	DF	P	Normed $\chi^2$	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
<b>Satisfaction</b>	3.279	2	.194	1.640	.996	.978	.990	.988	.996	.014	.041

(Source: Survey Data)

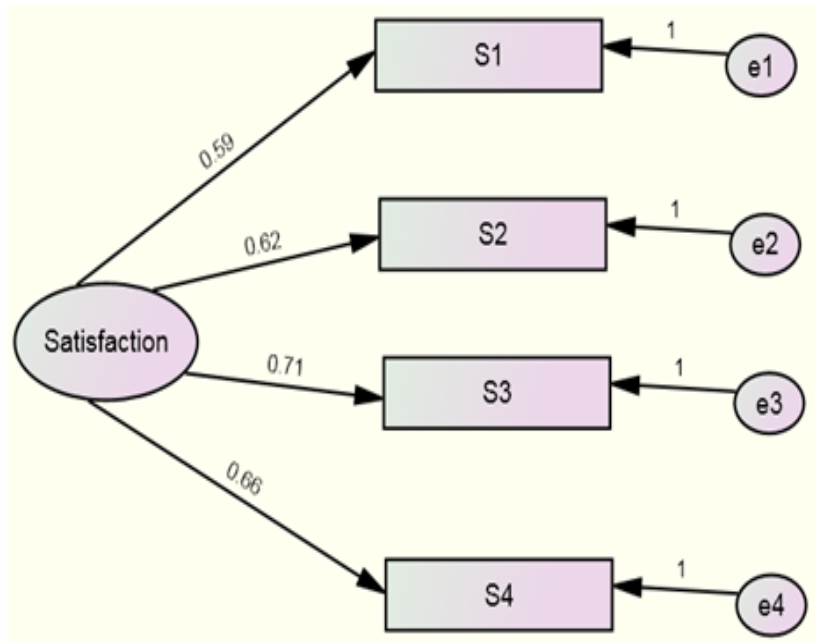
All the attributes loaded significantly on the latent constructs. The value of the fit indices indicates a reasonable fit of the measurement model with data.

**Table 4 Regression coefficients for satisfaction from investment**

Factors/ Latent Variables (Dependent Variable): Satisfaction	Construct (Independent Variable)		Regression Coefficient	C.R.	P	Variance explained (%)	Cronbach Alpha coefficient before	
							Before	After
S1	Service Quality		0.588			34.6	0.740	0.740
S2	Grievance redressal		0.620	8.246	<0.001	38.5		
S3	Risk and return		0.714	9.17	<0.001	51.0		
S4	Overall performance		0.663	8.49	<0.001	43.9		

(Source: Survey Data)

From the table above, it is observed that all the constructs has regression coefficient value more than 0.4. That is in this case all these constructs i.e., service quality, grievance redressed, risk and return and overall performance has significant impact on satisfaction of the teachers towards investments.



**Figure 1 Analysis of satisfaction from investments**

For the analysis an input model was developed (Fig.1). The rectangle represents observed factors from S1 to S4; ovals represent unobserved variable e1 to e4. The small circles with arrows pointing from the circles to the observed variables represent errors /unique factors, which are also known as, squared multiple correlation of the standard error.

**5. Implication**

Investment is a commitment of a person’s funds to derive some future income. Every individual investor possesses different mindset when they decide about investing in a particular investment avenue such as stocks, bonds, mutual funds, fixed deposit, real estate, bullion etc. In each life cycle stage, every individual desires his hard earned money to be invested in most secure and liquid avenue. However, the decision varies for every individual depending on their risk taking ability and the purpose for which such investment is to be done. Purpose of investment can be related with saving objective.

Looking at the trend and investment style of female teachers, financial instruments with the features of low risk and regular income should be floated to enhance their savings and investments. However, male teachers who showed interest in risky investment options must also to be encouraged. The lack of learning attitude is leading to low product knowledge, low market information and less use of technology. The investors have to make use of available sources and practice the habit of learning. Investors must be taught to read and understand through magazines and news papers on the trends of investment. Safety is the most



influencing investment objective identified. The central and state government should spread saving and investment habit by making sufficient safety mechanism. Investors should be enlightened about other objectives of investment so as to enable them to understand the other side of the investment. Diversification was found to be influencing factor. So the investors need to allocate investments by picking the right combination of financial instruments to best match one's needs. It is recommended that the entire savings available for investment should be divided at least into four to five portions so that the investment is spread over different areas to reduce risk.

## **6. Conclusion**

The Indian economy is growing significantly and the financial market provides ample opportunities for investors to invest. Individual investor still prefers to invest in financial products which give risk free returns. The study also confirmed that the investors even if they are of high income and well educated prefer to play safe in the market. Financial regulators have to organize seminars, programs and sessions for creating awareness in individual investors as well as to boost confidence level among them. The confidence level, responsibility taking ability and stress management capacity of the investors need to be boosted up.

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