

SOURCES FOR INVESTMENT DECISION AND FINANCIAL LITERACY LEVELS OF SOFTWARE ENGINEERS IN HYDERABAD

¹Dr.B.Srinivas

Assistant Professor (PTL),

Department of Commerce,

University Post Graduate College, Secundrabad, Osmania University – Hyderabad, Telangana. India.

Abstract: Financial literacy is demarcated as the capability to ensure acquaintance and knowledge about financial markets and financial products. Financial literacy term sounds alien to many people and many find it beyond their comprehension. Lack of financial literacy puts a pressure on the country in terms of rise in cost of financial security and lesser development of nation. It also makes the life of an individual very difficult and complex. The present study explores on financial literacy of software engineers – sources for investment decision and financial literacy levels of software engineers in Hyderabad.

Index Terms - Component,formatting,style,styling,insert.

I. INTRODUCTION

Financial literacy is demarcated as the capability to ensure acquaintance and knowledge about financial markets and financial products. It makes the individuals aware about the risk and reward associated with investment avenues and helps them to make informed choices. It primarily relates to financial education of an individual and taking of effective measures to mend general welfare and shun the suffering in matters that are of financial nature. People often have constrained assets and expertise to comprehend the intricacies of financial transactions with financial intermediaries on affairs related to individual finance on a daily basis. Financial literacy improves the quality of life an individual can afford as well as bring a change in the veracity and eminence of markets. It helps to equip persons with fundamental tool for budgeting, facilitate them to attain the discipline towards saving and thus, make sure that they can benefit and can from a good life post retirement. Financially knowledgeable individuals can help the economy by motivating healthy competition, motivating the service providers to improve competition level. Financial Literacy is the amalgamation of skill, knowledge, attitude and behavior that transforms into relevant financial decisions and proper usage of financial services. Financial knowledge imparts awareness regarding the risk and return associated with different financial products to the consumers. Financial crisis can be handled in much better way if financial literacy is attained. The knowledge about financial matters helps to hedge the risk and to maintain financial system in a stable manner.

II. DEFINITION OF FINANCIAL LITERACY

Jacob, Hudson, and Bush (2000) said that financial knowledge is not about convenience but has emerged out as an important survival tool. The way we relate to money is changing because of new products and technologies.

Coussens.D.M (2006) stated that financial literacy is beneficial for both consumers as well as for the financial system. With the help of financial literacy there would be less chance of falling victim to fraud related to credit and would improve efficiency of market operations and leads to economic development.

II. Review of Literature

There is a plethora of studies on financial literacy and investment decisions with specific reference to many domains in India. Some of the important studies are reviewed and presented in the following lines.

1. **Ramesh Prasad Chaulagain (2017)⁽¹⁾ “Relationship between Financial Literacy and Behavior of Small Borrowers”**. The study found that there is statistically significant relationship between financial literacy and attitude, between financial literacy and behavior and between financial attitude and behavior. Therefore, to change the financial behavior of the small borrowers, their financial literacy is to be improved. Similarly, the improved education contributes the financial literacy of the individuals.
2. **FazalHadi (2017)⁽²⁾ “Effect of Emotional Intelligence on Investment Decision Making With a Moderating Role of Financial Literacy”** he found even more significant and positive relationship between these two variables. Financial literacy of investors did play as significant moderated role between the associations of emotional intelligence and investment decision making.
3. **Hawati Janor1, Rubayah Yakob1, Noor Azuan Hashim1, Zanariah2, CheAnizaChe Well (2016)⁽³⁾ “Financial literacy and investment decisions in Malaysia and UnitedKingdom: A comparative analysis”**theyconcluded that FL level is low and necessary measures should be taken by the government to increase awareness about financial related matters.
4. **Rotich David Kipkorir1 (2016)⁽⁴⁾ “Influence of Investment Decisions on the Financial Performance of SACCOS: A Survey of Registered SACCOS in Baringo County”**. the study concludes that investment in real estate, lending to members, lending to Government and FOSA activities had a positive influence on the financial performance of SACCOS in Baringo County.

5. **Adi Meir, YevgenyMugermanOrly Sade (2016)⁽⁵⁾** "Financial Literacy And Retirement Planning Evidence From Israel" from the paper they focuses on financial knowledge and conduct, maps demographic and behavioral variables and the correlations between them and financial literacy, particularly as it applies to retirement planning. They found a correlation between retirement literacy and the following financial literacy indicators:

IV. OBJECTIVES OF THE RESEARCH

The study aims to analyze the level of financial literacy among the software engineers and its impact on investment decisions that have reflection on their investment behavior in a comprehensive manner. Hence the specific objectives of the study are:

1. To study the financial literacy levels of Software Engineers.
2. To study the sources of financial literacy levels to Software Engineers.
3. To study the factors influencing the Investment Decisions.

V. METHODOLOGY

For the current research study, the investigative and descriptive tests are used and the researcher had the "Financial Literacy and Investment Decisions of Software Engineers in Hyderabad". To investigate this research, primary and secondary data were used. The research data collections methods are discussed in the detail. Accurate plan actions are required for get sample form a selected sample population, it can termed as a sample design. Researcher adopted the proper sample procedure to select the items from sample. Researcher has used purposive sampling method for the collection of the data. This method is a non-probability sampling approach, in which sample is selected on the basis of the population characteristics and objectives of research. For collection of data, primary and secondary sources have been used. A closed ended structured questionnaire used to collect from the software engineers from the selected top companies in the Hyderabad, Telangana.

The structured questionnaire was used to understand the respondent's financial literacy and their decision making towards investments. Secondary data was collected from the various journals, magazines, newspapers and magazines and related documents.

Calculation of sample size

The present research study is an investigative in nature, the study is done based on top five IT companies working in Hyderabad selected on the basis of market capitalization as criteria. In order to study the perception of Software Engineers from each company sample variables are selected proportionately based on the population of select companies and sample determination principle. Hence, the total sample size is 1062.

Table-1.1: Select Top Five Companies on Rankings by Market Capitalization

Sl. No	Name of the Company	Market Capitalization (Rupees in Cores)	Rank
1	Tata Consultancy Services	5,06,703	1
2	Infosys	1,92,198	2
3	Wipro	1,40,481	3
4	HCL Technologies Ltd	1,07,878	4
5	Tech Mahindra Ltd	50,467	5

Source: www.nasscom.in

The total workforce in the select IT companies is 2,09,688 out of that Population the sample is detrained and drawn by the following formula. For this purpose, the following formula has been used for the calculation of large population.

$$N = \frac{Z^2 \cdot p \cdot q \cdot N}{E^2 (N - 1) + Z^2 \cdot p \cdot q}$$

Where:

p= Sample proportion;

q=1-p;

E= Margin of error,

Z= the value of the standard variant at a given confidence level and to be worked out from table showing area under normal curve;

$$N = \frac{\{(1.96)^2 (0.5) (0.5)^2 2, 09\}688}{\{(0.03)^2 (2, 09,688-1)+(1.96)^2 (0.5) (0.5)\}} = \frac{2,01,384.355}{188.7183 + 0.9604} = \frac{2,01,384.355}{189.6787} = 1062$$

Table-1.2: Proportionately the Sample is Determined our Companies As Follows

S. No	Name of the Company	No of Employees	Sample Variables drawn
1	Tata Consultancy Services	52,832	319
2	Infosys	52,715	265
3	Wipro	53,700	276
4	HCL Technologies Ltd	29,948	149
5	Tech Mahindra Ltd	10,493	53
	<i>Total</i>	<i>2,09,688</i>	<i>1062</i>

SOURCE OF INVESTMENT INFORMATION:

This section explored that respondent preference about the various advice source of information about investment. For seeking source of advice investment selected respondents preference was asked for Abridged Prospectus, Newspaper Journals & Magazines, TV Channels, Investments Related Websites, Brokers / Analysts Forecast, Investor Forum, Technical Analysis, Company Announcements, Stock Exchange Announcements and Others (Friends , Relatives etc). The following tables were revealed that the respondent's agreement levels on the base of ranking.

Table 1.3: Analysis Statistics Sources of investments information

Variable	N	Mean	Std. Deviation	Rank
	Abridged Prospectus			
Newspaper Journals & Magazines	1062	3.90	2.832	1
TV Channels	1062	5.53	2.743	4
Investments Related Websites	1062	4.00	2.394	2
Brokers / Analysts Forecast	1062	6.48	2.329	10
Investor Forum	1062	5.75	2.750	6
Technical Analysis	1062	6.13	2.426	8
Company Announcements	1062	5.58	2.772	5
Stock Exchange Announcements	1062	6.21	2.812	9
Others (Friends , Relatives etc)	1062	5.16	3.467	3

(Source: Compiled from Primary Data)

It is evident that the mean and Std. deviation values for respected items are Negative. Maximum mean is witnessed for item Newspaper Journals & Magazines mean is 6.48 and lowest mean value for item is Newspaper Journals & Magazines is 3.90. Similarly, the maximum std. deviation value for item Newspaper Journals & Magazines is 2.832 and lowest std. deviation value for item Brokers / Analysts Forecast is 2.329. According through ranking order Brokers / Analysts Forecast occupies 10th rank; followed by Stock Exchange Announcements is 9th rank and Newspaper Journals & Magazines have First rank from the data analysis.

Investors Level of Awareness on Various Investments Avenues:

This section explored that respondents awareness levels towards different investment avenues. For seeking awareness level of respondents on different investment levels, the following tables were indicates the level of agreement (from very low to very high) of selected respondents. The investors data obtained in this regard are accessible in following tables.

Table 1.4: Levels of Awareness on Investment Avenues

Variable	N	Mean	Std. Deviation	Rank
Saving Accounts	1062	3.43	1.265	2
Bank Fixed Deposits	1062	3.37	1.335	6
Public Provident Fund	1062	3.10	1.283	7
National Saving Certificates	1062	2.47	1.266	15
KisanVikasPatras	1062	2.21	1.243	17
Post Office Savings	1062	2.69	1.357	9
Government Securities	1062	2.50	1.377	14
Mutual Funds	1062	2.81	1.342	8
Life Insurance Policy	1062	3.32	1.288	4
Debentures	1062	2.62	1.364	10
Bonds	1062	2.58	1.453	12
Equity shares	1062	2.62	1.457	11
Commodity market	1062	2.55	1.456	13
Forex market	1062	2.45	1.483	16
Real Estate	1062	3.31	1.524	5
Gold Silver	1062	3.54	1.384	1
Chit funds	1062	3.42	1.500	3

(Source: Compiled from Primary Data)

It is evident that the mean and Std. deviation values for respected items are positive. Maximum mean is witnessed for item **Gold Silver** mean is 3.54 and lowest mean value for item **KisanVikasPatras** is 2.21. Similarly, the maximum std. deviation value for item is **Real Estate** is 1.524 and lowest std. deviation value for item **KisanVikasPatras** and its value is 1.243. According ranking Gold silver occupies 1st position, Saving Accounts 2nd rank and last rank by KisanVikasPatras.

Table: 1.5: Analysis of Financial Literacy Level

Variable		Frequency	Percent	Valid Percent	Cumulative Percent
Financial Literacy Level	Low	220	20.7	20.7	20.7
	Moderate	625	58.9	58.9	79.6
	High	217	20.4	20.4	100.0
	Total	1062	100.0	100.0	

Table: 1.5: Analysis of Financial Literacy Level

From the above table it is clearly stated that the respondents responded for **Financial Literacy Level** for low level is 220, 625 assigned for moderate level and 217 assigned for high level.

Results analysis: Below table talks about one way descriptive of financial literacy score of two variables and it also disclose the variables mean, std. deviation and std. error of the selected variable in the study.

One-way Descriptive Results analysis: Below table talks about one way descriptive of financial literacy score of two variables and it also disclose the variables mean, std. deviation and std. error of the selected variable in the study.

Table 1.6: One-way Descriptive Financial Literacy Score and Age

Variable	N	Mean	Std. Deviation	Std. Error
Up to 21	160	73.4375	14.14466	1.11823
22 -35	528	74.9356	16.87389	.73434
36 - 45	199	76.4975	24.00502	1.70167
46 - 65	167	96.6347	17.44746	1.35013
66 Above	8	71.8137	3.20713	1.13389
Total	1062	78.6638	19.89665	.61054

It is evident that the mean and Std. deviation values for respected items are positive. Maximum mean is witnessed for 66 above mean is 108.0000 and lowest mean value for item Up to 21 is 73.4375. Similarly, the maximum std. deviation value for item 36 - 45 is 24.00502 and lowest std. deviation value for item 66 above and its value is 3.20713.

Table 1.7: ANOVA: Financial Literacy Score and Age

Variable	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	73461.339	4	18365.335	56.03	.000
Within Groups	346563.653	1057	327.875		
Total	420024.992	1061			

The table discloses the mean difference between the **age in years** and Financial Literacy Score. The result shows that there is a statistical significance mean difference of gender and Financial Literacy Score and the value of F distribution is 56.013; $f(4,1057) = 56.013$; $p < 0.05$

Table 1.8: Descriptive Financial Literacy Score and Education

Variable	N	Mean	Std. Deviation	Std. Error
Post-Graduation	364	73.5247	17.55941	.92036
Graduation	455	73.6110	16.07212	.75347
Professional	74	88.3649	25.81418	3.00084
Any Other	169	99.0888	16.08824	1.23756
Total	1062	78.6638	19.89665	.61054

It is evident that the mean and Std. deviation values for respected items are positive. Maximum mean is witnessed for Any Other mean is 99.0888 and lowest mean value for item Post-Graduation is 73.5247. Similarly, the maximum std. deviation value for item Professional is 25.81418 and lowest std. deviation value for item Graduation and its value is 16.07212.

Table 1.9: ANOVA -Financial Literacy Score and Education

Variable	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	98697.252	3	32899.084	108.323	.000
Within Groups	321327.740	1058	303.712		
Total	420024.992	1061			

The table discloses the mean difference between the **Education** and Financial Literacy Score. The result shows that there is a statistical significance mean difference of Education and Financial Literacy Score and the value of F distribution is 108.323; $f(3,1058) = 108.323$; $p < 0.05$.

Table 1.10: One-way Descriptive Financial Literacy Score and Annual Income

Variable	N	Mean	Std. Deviation	Std. Error
Below 2 Lakh	128	74.661	13.60076	1.20215
2 Lakh to 4 Lakh	292	74.185	17.21617	1.00750
4 Lakh to 6 Lakh	252	77.926	19.32193	1.21717
Above 6 Lakh	390	83.813	22.57191	1.14297
Total	1062	78.668	19.89665	.61054

It is evident that the mean and Std. deviation values for respected items are positive. Maximum mean is witnessed for Above 6 Lakh mean is 83.8103 and lowest mean value for item 2 Lakh to 4 Lakh is 74.1815. Similarly, the maximum std. deviation value for item Above 6 Lakh is 22.57191 and lowest std. deviation value for item Below 2 Lakh and its value is 13.60076.

Table 1.11: ANOVA Financial Literacy Score and Annual Income

Variable	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	18381.530	3	6127.177	16.0	.000
Within Groups	401643.41	1058	379.625		
Total	420024.92	1061			

The table discloses the mean difference between the **Annual Income level** and Financial Literacy Score. The result shows that there is a statistical significance mean difference of gender and Financial Literacy Score and the value of F distribution is 16.140; $f(3,1058) = 16.140$; $p < 0.05$.

Table: 1.12 - One-way Financial Literacy Score and Number of family members

Variable	N	Mean	Std. Deviation	Std. Error
2 – 3	239	76.8201	15.10346	.97696
4 – 5	645	77.0822	20.52489	.80817
6 – 7	133	94.4436	16.76008	1.45328
8 and Above	45	64.4889	17.03689	2.53971
Total	1062	78.6638	19.89665	.61054

It is evident that the mean and Std. deviation values for respected items are positive. Maximum mean is witnessed for 6 - 7 members mean is 94.4436 and lowest mean value for item 8 and Above is 64.4889. Similarly, the maximum std. deviation value for item 4 - 5 members is 20.52489 and lowest std. deviation value for item 2 - 3 members and its value is 15.10346.

Findings: Analysis Statistics Sources of investments information

- Maximum mean is witnessed for item Brokers / Analysts Forecast mean is 6.48
- Lowest mean value for item is Newspaper Journals & Magazines is 3.90.
- Similarly, the maximum std. deviation value for item others (Friends, Relatives etc) is 3.467.
- Lowest std. deviation value for item Brokers / Analysts Forecast is 2.329.
- According through ranking order Brokers / Analysts Forecast occupies 10th rank;
- followed by Stock Exchange Announcements is 9th rank and
- Newspaper Journals & Magazines have First rank from the data analysis.

Findings: Investors Level Of Awareness on Various Investments Avenues

- Maximum mean is witnessed for item Gold Silver mean is 3.54.
- Lowest mean value for item KisanVikasPatras is 2.21.
- Similarly, the maximum std. deviation value for item is Real Estate is 1.524
- Lowest std. deviation value for item KisanVikasPatras and its value is 1.243.
- According ranking Gold silver occupies 1st position,
- Saving Accounts 2nd rank and last rank by KisanVikasPatras.

Findings: Factors Influencing Investment Decision

- It is evident that the mean and Std. deviation values for respected items are positive.
- Maximum mean is witnessed for item Long term benefits mean is 3.58.
- Lowest mean value for item High liquidity is 2.80.
- Similarly, the maximum std. deviation value for item is Higher Returns is 1.354
- Lowest std. deviation value for item High liquidity and its value is 1.146.
- According through rank order Long term benefits had 1st rank, followed by Safe money occupy 2nd position
- High liquidity occupies least rank from the table analysis

Suggestions

- Respondents do not have a proper source of information regarding financial investment; they just follow the Newspaper Journals & Magazines, Investments Related Websites, Friends and Relatives only. So, top of the companies should have to focus on best other elements which create more awareness and information with easily accessible regarding financial literacy.
- Investor has awareness only on the Gold Silver, Saving Accounts and Chit funds avenues; but they do have awareness regarding different investment avenues. So the company's people they need to explore more awareness on the various investment avenues with suitable channels. So company people need to trigger on each and every avenues to create awareness.
- Major influence factors like Long term benefits, Safe money and Tax Benefits had great impact on respondent's investment decisions. Remaining factors were did not impact on them. So company's people should explain more each on every factor and create more awareness.

CONCLUSION

There is any significant mean difference between financial literacy and demographical factors of respondents. Demographical factors are age, gender, marital status, Education, Annual Income level, Family size, Annual saving have statistical significant mean difference with financial literacy. The f-distribution value of age group is 56.013 and it is statistically significant, because p-value of age group is smaller than p- value. Followed by, gender was statistical significance mean difference with Financial Literacy Score and the value of F distribution is 9.353 with degree of freedom 1,1060; and sig. value implies that it is smaller than p- value ($p < 0.05$). There is a statistical mean difference among the marital status and Financial Literacy, due to its sig. value is smaller than p-value. Similarly, remaining factors are education, Annual Income level, Family size have statistical mean difference with financial literacy. Chi-square test shown that variables are not independent of each other and that there is a statistically significant relationship between the investment decision variable and **demographic factors of respondent's**. Finally, chapter concluded that null hypotheses strongly rejected and alternative hypotheses accepted. Hence, there is a statistical mean difference between financial literacy and demographical factors of respondents.

Reference:

1. Ramesh Prasad Chaulagain (2017) "Relationship between Financial Literacy and Behavior of Small Borrowers" JEL Classification: G21, G29 NRB Working Paper No. 38.
2. FazalHadi (2017) "Effect of Emotional Intelligence on Investment Decision Making With a Moderating Role of Financial Literacy" China-USA Business Review, Feb. 2017, Vol. 16, No. 2, 53-62.
3. Hawati Janor¹, Rubayah Yakob¹, Noor Azuan Hashim¹, Zanariah², CheAnizaChe Well¹ "Financial literacy and investment decisions in Malaysia and UnitedKingdom: A comparative analysis" GEOGRAFIA OnlineTM Malaysian Journal of Society and Space 12 issue 2 (106 - 118), 2016, ISSN 2180-249.
4. Rotich David Kipkorir¹, Barbara M. Namiinda², Doreen Njeje³ "Influence of Investment Decisions on the Financial Performance of SACCOS: A Survey of Registered SACCOS in Baringo County" ISSN Volume 5 Issue 4, April 2016, International Journal of Science and Research.
5. Adi Meir* ,YevgenyMugerman** Orly Sade*** "Financial Literacy And Retirement Planning Evidence From Israel" Israel Economic Review Vol. 14, No. 1 (2016), 75-95.
6. TatjanaAubrama, Monika Kovarova-Simeceka, and Gabrielle Wanzenriedb* "Financial Literacy and Retirement Planning - A Comparative Study for Austria and Switzerland .JEL Classification: I22; J26; D14 ; P46; P52 ; C25. 2016.

BOOKS

1. National Standards in K-12 Personal Finance Education, (2015).
2. P. Mathuraswamy and G. Rajendran. "Essence of Rational Investment in Equity Market: An Empirical Study" IJER © Serials Publications, 2015, ISSN: 0972-9380.
3. Dr. Sandeep Ahlawat. Financial Literacy. Eduheal Publishers, 2015.
4. Abdul Azeez N.P. Financial Literacy and Inclusion in India. New Century Publications. 1st edition, 2015.