

An Analytical Study of Financial Literacy and its Determining Variables: A Multiple Regression Modeling Approach

¹Sanjay Sakariya and ²Dr. Neelima Ruparel

¹Research Scholar, B K School of Professional and Management Studies, Gujarat University, Ahmedabad, Gujarat (India) -380009

²Professor, B K School of Professional and Management Studies, Gujarat University, Ahmedabad, Gujarat (India)- 380009

ARTICLE DETAILS

Article History

Published Online: 20 January 2019

Keywords

Financial Literacy, Financial Inclusion, Financial Literacy Level, Multiple Regression

*Corresponding Author:

Email: smsakariya@gmail.com

ABSTRACT

Measuring and evaluating the level of financial literacy is very significant to strengthen the economy and financial system for a particular country. The goal of financial inclusion is also very significantly depends on the level of financial literacy in the society. Such an important role of financial literacy calls for the identification and measurement of a model which evaluates various indicators and factors that create a level of financial literacy; essential for financial inclusion. The present study is an effort to identify and measure various variables as independents that affects the level of financial literacy which is a dependent variable. This study also reveals that how the overall level of financial literacy is very positively influenced by the combined effects of all six factors together. The present study can also be carried out in the future by considering the effects of various demographic variables as determinants as well as moderators between financial literacy and financial inclusion.

1. Introduction

Financial literacy has become a very important and integral part of achieving the goal of financial inclusion in any economy. Financial literacy is very significant to understand not only for investors but also for the general public and layman. The concept of financial literacy is a fundamental step to move towards financial inclusion in society and for the economy. The level of financial literacy provides awareness and knowledge on the pros and cons of various financial instruments and their operationalities. Financial literacy plays a very important role in making any investment-related decision or management of funds for an individual. The concept of financial inclusion or inclusive growth can be achieved only with a very noteworthy level of financial literacy in society and in the economy.

Even though, the known benefits of financial literacy and its impact on financial inclusion, many studies indicate that various countries in the world still do not been able to reach an adequate level of financial literacy (Lusardi & Mitchell, 2011). It is also proposed that to improve the level of financial literacy there must be a model which describes determinants for financial literacy at an individual level (Bhushan&Medury, 2013). To increase the level of financial literacy in India, many policies have been formulated and implemented by various concerned controlling and regulatory authorities viz Reserve Bank of India (RBI), Security Exchange Board of India (SEBI), Insurance Regulatory Development Authority of India (IRDA), etc many other such bodies. Such authorities are involved in different programs aimed at improving financial literacy in the country.

In the current scenario, it is very significant to have a good level of financial literacy to take various finance and investment-related decisions for an individual. Globally, financial literacy is identified as a very important determining indicator for the very good financial health of a person and also

for the growth of the economy at large. A different set of financial products and services are needed to be understood well by individuals to make rational financial decisions. Over some time, due to the increasing diversity of financial instruments in the market, decision-making for investment in such products has become very complicated. Even the factors like technological breakthroughs, innovations, etc. have made such decisions more complex and difficult for an individual investor. This kind of situation has raised a serious need for a comprehensive and good level of financial knowledge and awareness to make an ideal investment decision.

It is seen that people with less experience with financial instruments have a pessimistic view about financial concepts due to which they end up making improper investment and financial decisions (Chen & Volpe, 1998). Such type of people invest less in the security market (Rooij, Lusardi, & Alessie, 2007), and even accumulate poor wealth and improper and insufficient plans for life after retirements (Lusardi, 2008; Lusardi & Mitchell, 2009). The protection of investors and consumers of such financial instruments needs a very good level of financial knowledge because such knowledge and awareness make people aware of the risk involved in financial decision makings.

2. Literature Review

Agarwalet al. (2010) has surveyed a total around more than 1600 people from the city of Hyderabad and studied the various aspects of financial concepts like risk tolerance, investment behavior, insurance coverage, etc. This study suggested that people with a good level of financial awareness make the right investment decisions.

Jariwala (2014) has taken around 44 variables to evaluate the level of financial literacy of the investors across the state of Gujarat and also studied the influence of these factors on

overall financial literacy. The result of the research found that around 40% of the respondents show a very good level of financial literacy and the study also indicates that such financial literacy has a good influence on decisions related to investment.

Gupta and Kaur (2014), have studied the level of financial literacy of 87 businessmen involved in micro-level business activities. This study has also involved the perception and understanding of the respondents towards investment planning, investment avenues, and their execution. The result of the study shows that financial awareness and financial skill have a very significant influence on overall financial literacy and decisions related to investments.

Mathavathani and Velumani (2014), have stressed that financial literacy at a rural level specifically amongst women get influenced by three important indicators i.e. knowledge, behavior, and attitude. The survey was done on around 500 respondents and it shows that, as far as demographics are concerned, male respondents show a high level of financial literacy than females. Apart from gender, other demographics like income, occupation, education, etc also affect the level of financial literacy.

Narendra (2014) has studied the role of the financial advisor to improve the level of financial literacy. The study shows that in the current scenario, where over availability of the information can lead to poor and inefficient investment decisions. In such cases, the role of a financial consultant is very important in spreading financial literacy.

Bahadur et al. (2015) has studied that there are two main foundations of any economy, i.e. financial literacy and financial inclusion. The study also reveals that the level of financial literacy amongst people was very low and to improve the level of financial literacy, various awareness, and knowledge-oriented programs should be carried out by focusing on school and college-level curriculum.

Agarwal, Ansar, Yadav, and Kureel (2015) have stressed that it is very important to have a good level of financial literacy to decide about finance and investment patterns. The study shows that education plays a very important role. In the study, Levene's test of homogeneity of variance was carried out and it also suggests that people with more education have a higher level of financial literacy than people with a low level of financial literacy.

Paluri and Mehta (2016) have studied that the indicators that affect the economic behavior of women in India and based on this study total of nine behavioral attitudes were identified viz anxiety, interest in financial issues, free-spending, financial goals, etc. the study also shows women in the city have a good understanding of the various level of financial literacy. This study has made use of exploratory factor analysis and two-stage cluster analysis. The study was very comprehensive and focused on the various qualitative aspect regarding financial literacy and its impact on financial inclusion at various levels.

Based on the literature review it has been revealed that there has no existence of a specific model/instrument to measure the level of financial literacy which is essential for financial inclusion in India. Therefore, the present study provides reasonable scope to develop a holistic model/instrument to measure the financial literacy level (essential for financial inclusion) through evaluating various indicators and factors which has a direct impact on the level of financial literacy.

3. Research Objectives and Methodology

3.1 Research Objectives

- 1) To identify major determinants of financial literacy.
- 2) To evaluate the impact of the various determinants on the level of financial literacy.
- 3) To study the nature and intensity of the relationship between financial literacy and other independent determinants.

3.2 Research Hypothesis

H0: There is no significant influence of all the determinants on the level of financial literacy

H1: There is a significant influence of all the determinants on the level of financial literacy.

3.3 Research Methodology

We followed the survey method to understand the key determinants that affect the level of financial literacy. Considering the nature of research, descriptive and causal research approaches are the most suitable approach for the present study. To examine the financial literacy of the people, data was collected by using a questionnaire developed by self-validated scales of determinants of financial literacy. Using the non-probability convenience sampling technique, data of 150 individuals were collected through a personal interview survey method from Ahmedabad city of Gujarat state. A Multiple Regression Modelling Approach is used to understand significant relations between all the determinants (independent variables) and level of financial literacy (dependent variables). Multiple regressions also help to understand the contribution of all the independent variables in relationship with the dependent variable.

4. Data Analysis and Interpretation

In the present study, six factors are taken into consideration as independent variables including Financial Knowledge, Financial Behaviour, Financial Attitude, Financial Aptitude, Financial Awareness, and Financial Influence. The level of Financial Literacy is taken as a dependent variable for the study. The mean score was considered as the representative value for the indicator or variable to carry out the analysis part.

Person correlation was performed first to make a base for the multiple regression. Below Table 1 provides the coefficient of the relation between all independent variables and dependent variables.

Table 1: Correlation

	Financial Literacy	Financial Attitude	Financial Behaviour	Financial Influence	Financial Awareness	Financial Knowledge	Financial Aptitude
Financial Literacy	1.000	.914	.894	.945	.886	.901	.856
Financial Attitude	.914	1.000	.968	.965	.984	.986	.965
Financial Behaviour	.894	.968	1.000	.956	.986	.966	.959
Financial Influence	.945	.965	.956	1.000	.955	.965	.966
Financial Awareness	.886	.984	.986	.955	1.000	.956	.965
Financial Knowledge	.901	.986	.966	.965	.956	1.000	.985
Financial Aptitude	.856	.965	.959	.966	.965	.985	1.000

N= 150, All Correlation are statistically significant at 5% level of significant

The coefficient of the correlation was positive for all the variables and varied between 0.986 to 0.856. All the coefficients of the correlation were statistically significant at a 5% level of significance. The correlation summary provides a good base for the multiple regression.

The model summary of Financial Literacy and all six explored variables is given in Table 2 and it shows the coefficient of determination (R^2) under the model which is 0.897, which meant all six factors combine explained 89.7 percent of the variations in Financial Literacy.

Table 2: Model Summary^b

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate	Change Statistics				
						R Square Change	F Change	df1	df2	Sig. Change
1	.924 ^a	.897	.843		.24533	.825	621.23	6	143	.000

a. Predictors: (Constant), Financial Aptitude, Financial Influence, Financial Behaviour, Financial Awareness, Financial Attitude, Financial Knowledge

b. Dependent Variable: Financial Literacy

Table 3: ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	177.412	6	30.86	621.23	.000 ^b
	Residual	22.457	143	.058		
	Total	199.869	149			

a. Dependent Variable: Financial Literacy

b. Predictors: (Constant), Financial Aptitude, Financial Influence, Financial Behaviour, Financial Awareness, Financial Attitude, Financial Knowledge

The ANOVA is used to study the overall level of significance of the regression model under study (Table 3). In the table, the F-value (621.23) and the p-value is 0.000. This

suggests that the proposed model is significant and all the six determinants/variables have a very positive and significant contribution towards the development of financial literacy.

Table 4: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.125	.065		-1.933	.054		
	Financial Attitude	.202	.019	.228	10.796	.000	.449	2.227
	Financial Behaviour	.100	.017	.102	5.773	.000	.643	1.556
	Financial Influence	.291	.015	.346	19.248	.000	.622	1.609
	Financial Awareness	.123	.013	.185	9.373	.000	.516	1.938
	Financial Knowledge	.203	.017	.271	12.194	.000	.406	2.464
	Financial Aptitude	.118	.019	.138	6.367	.000	.426	2.346

a. Dependent Variable: Financial Literacy

Table 4 provides the coefficient of the model. According to the table, it can be said that all explored determinants significantly influencing Financial Literacy.

5. Findings and Conclusion

It can be concluded for the study that all the factors are very much statistically significant as the p-value of all the factors is less than 0.05. Among all the factors Financial Influence, Financial Knowledge, and Financial Attitude are the chief contributors and largely influencing the level of Financial Literacy. Other factors are also statistically significant but the intensity of the influence is low compare to other factors. The model can be written as:

$$\text{Financial Literacy} = -.125 + .202 (\text{Financial Attitude}) + .100 (\text{Financial Behaviour}) + .291 (\text{Financial Influence}) + .123 (\text{Financial Awareness}) + .203 (\text{Financial Knowledge}) + .118 (\text{Financial Aptitude})$$

Thus, as a strategist or as a policymaker; to improve financial literacy, it is very important to consider the key factors including Financial Influence, Financial Knowledge, and Financial Attitude of an individual in the economy. Further, it can be also said that the significant influence of other factors can also lead to the development of a level of financial literacy. Further study can also be carried out by considering socio-demographic factors and their influence on financial literacy as a determinant as well as a moderator also.

References

1. Agarwal, P., Ansar, S., Yadav, S. & Kureel, R. (2015). A Study on Financial Literacy among Working Women in Educational Sector of Jhansi District: With Special Reference to Investment Avenue, *International Journal of Advance Research in Science and Engineering*, 4(1), 54-61.
2. Agarwal, S., Amromin, G., David, I. B., Chomsisengphet, S. & Evanoff D.D. (2010). Financial Literacy and Financial Planning: Evidence from India, *SSRN Electronic Journal*, 1-45.
3. Bahadur, L. R. (2015). Financial Literacy: The Indian Story. *World Journal of Social Sciences*, 5(3), 45-57.
4. Bhushan, P. & Medury Y. (2013). Financial Literacy and its Determinants. *International Journal of Engineering, Business and Enterprise Applications (IJEBA)*, 4(2), 155-160.
5. Chen, H. & Volpe, R. P. (1998). An Analysis of Personal Financial Literacy among College Students. *Financial Services Review*, 7 (2), 107-128.
6. Gupta, K. & Kaur, J. (2014). A Study of Financial Literacy among Micro Entrepreneurs in District Kangra, *International Journal of Research in Business Management*, 2(2), 63-70.
7. Jariwala, H. V. (2014). Analysis of Financial Literacy Level of Retail Individual Investors of Gujarat State and Its Effect on Investment Decision. *Journal of Business & Finance Librarianship*, 133-158.
8. Lusardi, A & Mitchell, O. S. (2009). Financial literacy around the world: an overview. *Journal of Pension Economics and Finance*, Cambridge University Press, 10(04), 497-508.
9. Lusardi, A. (2008) *Financial Literacy: An Essential Tool for Informed Consumer Choice?* Paolo Baffi Centre Research Paper No. 2009-35, Available at SSRN: <https://ssrn.com/abstract=1336389> or <http://dx.doi.org/10.2139/ssrn.1336389>
10. Lusardi, A., & Mitchell, O. S. (2011). The Economic Importance of Financial Literacy: Theory and Evidence. *Journal of Economic Literature*, 52 (1), 5-44.
11. Mathavathani, V. & Velumani, M. (2014). A Study on Financial Literacy among Rural Women in Tamilnadu. *Indian Journal of Applied Research*, 4(12), 556-557.
12. Narendra, K. N. (2014), Financial Literacy: A Revolution Waiting to Happen. In *Proceeding of COFP Convention 2014*.
13. Paluri, R.A. & Mehra, S. (2016). Financial attitude based segmentation of women in India: an exploratory study. *International Journal of Bank Marketing*, 34(5), 670-689. <https://doi.org/10.1108/IJBM-05-2015-0073>
14. Rooij, M. V., & Lusardi, A & Alessie, R. (2007). Financial Literacy and Stock Market Participation. *Journal of Financial Economics*, Elsevier, vol. 101(2), pages 449-472