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Role of Financial Literacy in Predicting Financial Behaviour: The Mediating Role of Financial Self-Efficacy

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Abstract: The financial behaviour of an investor not only determines the wellbeing of individual, but that of the family, community and the nation as a whole. This makes it crucial to understand the drivers of financial behaviour. The current study is based on salaried class investors in Bengaluru, India. The researcher explored the impact of two antecedents of financial behaviour; financial literacy and financial self-efficacy. In addition, the intervening role of financial self-efficacy, on dependent and independent variables was also examined. A sample of 200 respondents were chosen for the study and data was collected through a structured questionnaire. Pearson's correlation and linear regression were used to test the hypotheses of the study. The results indicated a positive moderate correlation among the variables and suggests that financial literacy is vital in shaping the financial behaviour of an investor and this relationship is strengthened by financial self-efficacy. In addition to adding to the existing literature, the findings suggests that financial literacy accompanied by financial self-efficacy enable the investor to make prudent financial decision

Keywords: *Financial literacy, financial self-efficacy, financial behaviour, individual investor.*

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1. Introduction

Financial markets are currently witnessing a growth in financial products and instruments. This has led to active participation of individual investors in financial markets. (Calvet, Gonzalez-Eiras, &Sodini, 2004). As the markets are flooded by an array of complex financial products, the need for financial literacy has increase, which is expected to improve the ability of an individual to choose the best alternative, among the numerous available options (Lusardi & Mitchelli, 2007). Zucchi (2018) emphasized that the lower level of financial literacy is an issue prevalent not only in developing economies but also in developed nations. Due to the lower level of financial literacy, the individual investors lack the ability to identify the risk and uncertainty associated with the different financial instruments in the market.

The global financial crisis of 2008, highlighted the need and importance of financial literacy (Klapper, Lusardi, &Panos, 2013); as irrationality was observed in the behaviour of the investors, due to lack of understanding and knowledge (Friedman & Kraus, 2011). Traditionally, Indian households have been known to be partial to saving a major portion of their income. But since the last few years, the gross financial savings have dropped from 7.2 per cent of the GDP, in 2011-2012, to 6.5 per cent in 2017-2018. There has also been an increase in borrowing, in terms of home loans or credit card usage. This change brings into focus the need to understand the predictors of the financial behaviour of an investor.

The capability to handle his/her financial matters leads to the financial well-being of an individual and financial literacy is expected to assist an individual to make a sound financial decision in his/her day-to-day life. Financial literacy may be defined as the competence of a person to take effective decisions in using and managing money (Noctor, Stoney, & Stradling, 1992). It is blend of financial know-how knowledge, and ability that plays a crucial role in moulding the financial behaviour of an individual (INFE, 2011). Thus, financial literacy not only means the understanding of financial concepts but also the ability to apply the knowledge in their day-to-day financial activities.

Well-being of an individual was discussed by Bandura (1977) in his seminal work on self-efficacy. Self-efficacy is the belief an individual has in their achievements and their ability to use of their skills in critical situations. Self-efficacy theory suggests that individuals will not effectively participate in those activities for which their self-efficacy is low, as compared to those activities for which their self-efficacy is high (Van der Bijl & Shortridge-Baggett, 2002). This suggests that individuals with higher self-efficacy would not shy away from taking up a difficult task, as they treat it like a challenge rather than a threat. This initial reaction of an individual will guide his future behaviour. In other words, self-efficacy acts as a self-fulfilling prophecy (Gecus, 2003).

The construct of self-efficacy was applied to the context of financial management and was termed as financial self-efficacy. Individuals having a higher level of financial self-efficacy are expected to make better financial decisions and faces financial difficulties with much more ease (Bandura, 1994). In addition to the direct relationship between financial self-efficacy and financial behaviour, the current study emphasizes on the role of financial self-efficacy in the strengthening association between the dependent and independent variables.

2. Review of Literature

Lusardi (2007a) describes financial literacy (FL) as "the process by which financial consumers or investors improve their understanding of financial products and concepts, and through information, instruction, and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities to make informed choices, to know where to go for help, and to take other effective actions to improve their financial wellbeing". It is also defined by Servon (2008) as "a person's ability to understand and make use of financial concepts".

Literature suggests that financial literacy can predict other concepts like financial wellbeing, financial decision making and financial behaviour. Relationship between retirement planning and financial literacy is one of the areas that has attracted researchers and academicians (Lusardi, 2007b; Howlett, 2008). In the

area of corporate finance, McDaniel, (2002) differentiated between financial experts and financial literates, based on their methods of examining financial reports. Kindle (2010) also found a significant relationship between social issues like poverty and financial literacy.

Financial self-efficacy (FSE) was developed by borrowing from general self-efficacy concepts. Dietz, Carrozza, & Ritchey (2003) designed an instrument to measure financial self-efficacy. The scale was adapted from the global mastery scale (Pearlin and Schooler, 1978). In order to reduce financial debt, problems and financial stress, an investor should have higher financial self-efficacy, which results in more savings and financial happiness (Lapp, 2010).

Behaviour is any kind of reaction by an individual, in response to stimuli in their environment (Minton, 2014). Hence financial behaviour (FB) is an individual's response in the context of managing their finances. Cash, credit and saving behaviour are the major financial behaviours that have been evaluated (Bernheim & Garrett, 2003). Bernheim & Garrett, (2003) analysed the financial behaviour of individual investors by measuring and recording spending and saving habits, borrowing patterns, budgeting level and ability to understand financial products. In their research, they proposed that the information about financial products does not have any impact on the financial behaviour of an investor.

The current study draws from two main theories; the prospect theory and the social cognitive theory. According to the prospect theory, risk is the most important factor that an investor considers while making any financial decisions. The investor tries to assess all the investment avenues and then evaluates the potential loss or gain before deciding the best alternative (Kahneman & Tversky, 1979). Financial knowledge helps the investors to understand the pros and cons attached to every investment avenue, which helps them select the best option and thereby regulates their financial behaviour (Chen & Volpe, 1998). Lusardi (2008) in his study, has also discussed the importance of financial literacy in predicting the financial behaviour. The first hypothesis of this study is based on this proposed relationship.

H1: Financial Literacy would have a significant and positive impact on financial behaviour.

Albert Bandura developed self-efficacy as a part of the social learning theory (Ashford & Le Croy, 2010), which was further developed into social cognitive theory. The social cognitive theory revolves around the construct of self-efficacy and suggests that for an individual to accomplish their task or goal, higher level of efficacy is vital (Locke & Latham, 2002). The theory of self-efficacy indicates that an individual with a high level of self-efficacy will have higher motivation and this would impact their performance. Thus, behaviour is determined by how confident an individual believes he/she is and how well he/she can perform a task (Bandura, 1982).

It is further stated that the acquisition of knowledge expertise and abilities are predominantly determined by the self-efficacy levels of the individual (Pajares, 1997). According to social cognitive theory, an individual with a higher degree of self-efficacy is more capable of converting their knowledge to behaviour (Bandura & Wood, 1989). Individuals are more inclined to take up an activity or a task if they are confident of performing well (Van der Bijl & Shortridge-Baggett, 2002). This led to the second hypothesis of the study.

H2: Financial self-efficacy will strengthen the relationship between financial literacy and financial behaviour.

3. Methodology

The current study explores the role of financial literacy in predicting financial behaviour of salaried class investors living in Bengaluru, India. In addition, the study also evaluates the intervening role of financial self-efficacy. The primary data for the study was collected through a structured questionnaire.

Participants

The population of the study comprises individual investors living in Bengaluru, India. Purposive sampling was used by the researcher to collect the data. In order to be eligible, the individual had to belong to the salaried class and the criteria for inclusion was set as a minimum of one-year experience in investing. The scope was limited to the salaried class individuals given that they form a majority of the active population in the economy (OECD, 2021) and their financial behaviour is expected to be different due to a regular and fixed income (Thakur, 2018).

The final dataset comprised of 200 respondents from different socio-demographic background. The sample had a decent mix of respondents from various demographic categories. About 50% of the sample age lies between 21 to 40 years while 32% of the respondents were from the age group between 41 to 50. The rest 18 % of the respondents were between the age of 51 to 60. There was not a single respondent above the age of 60.57% of the sample were male while the rest were females. The maximum number of respondents 52%, were in the income bracket of 11 to 20 lakhs followed by 21% in the range of 21 to 30 lakhs. Only 18% of the respondents were from a range of fewer than 10 lakhs. Around 80% of the sample were either graduate or postgraduate. Around 68% of the respondents took their own financial decisions, while 32% of the respondents relied on either their spouse/parents/siblings, for making their financial decisions. The data was collected over the period of three months.The analysis of the data was done in SPSS21 and the mediation analysis was done through process macros v3.5.

Instruments

The questionnaire consisted of four sections where the first three sections measured financial literacy, financial self-efficacy and financial behaviour, respectively, of an investor while the last section examined the socio-demographic characteristics of the respondents. Five-point Likert scale was used by the researcher for measuring the independent, dependent, and mediating variables.

Financial literacy was measured through four major dimensions viz money management, financial knowledge, financial planning, and insurance coverage (Australian Unity, 2014). Financial behaviour of the investor was determined by consumer borrowing, saving/budgeting, investing/retirement plan, and credit card finance (Nye & Hillyard, 2013). Financial self-efficacy was measured through six statements given in financial self-efficacy scale (Lown, 2011). Apart from these, demographic characteristics like age, gender, income, and qualification were too assessed by the researcher. An attempt was also made to analyze whether the financial decisions are taken by the individual himself/herself or they relied on help of spouse/parents/siblings for the same.

The researchers first established the reliability of the scales using the Cronbach alpha values. All values were found to be above the threshold values of 0.7. The results of the analysis of the reliability of the instruments have been presented in Table 1.

Table 1: Reliability of research instruments

Scale	Number of items	Cronbach's alpha
Financial literacy	16	.885
Financial self-efficacy	06	.718
Financial behaviour	15	.866

4. Analysis

The researchers analysed the correlation between the variables through the Pearson correlation coefficient. The result of the correlation analysis has been presented in Table 2.

Table 2: Correlation Matrix

		Financial self-efficacy	Financial literacy	Financial behaviour
Financial self-efficacy	Pearson Correlation	1	.603**	.558**
	Sig. (2-tailed)		.000	.000
Financial literacy	Pearson Correlation	.603**	1	.437**
	Sig. (2-tailed)	.000		.000
Financial behaviour	Pearson Correlation	.558**	.437**	1
	Sig. (2-tailed)	.000	.000	

The correlation analysis suggests that all three variables are significantly correlated ($p<0.05$). The strongest correlation was found between financial literacy and financial self-efficacy.

Linear regression was used to test the direct impact of FL on FB. Table 3 summarises the results of the regression analysis.

Table 3: Summary of regression model

	β	Std. error	t	Sig.	Tolerance	VIF
(Constant)	1.546	0.268	5.775	0.00	1	1
FL	0.528	0.077	6.827	0.00		
	r	**R^2**	**Adjusted R^2**	**Std. Error of Estimate**	**F**	**Sig.**
1	0.437	0.191	0.186	0.673825	46.614	0.00

The R^2 value was found to be 0.191which indicates that 19.1% of the variance in respondents' financial behaviour can be predicted by his/her financial literacy. The regression model was found to be statistically significant ($p<.05$) and the following regression equation was derived;

$Financial\ behaviour = 1.546 + 0.528 * Financial\ Literacy$.....................(1)

The analysis of mediation was carried out using the Process macros. The results of the analysis have been presented in Figure 1.

Table 4: Mediation Analysis

(FL-FSE-FB)

	Effect	Total Effect		R^2
FL=>FB	0.189	0.528	**FB**	0.191
FL=>FSE	0.748			
FSE=>FB	0.452			

The path (direct effect) between financial literacy and financial self-efficacy was positively and statistically significant (b= .7475, s.e=.0703 $p<0.05$). The path (direct effect) from financial literacy to financial behaviour is positive and significant (b=.1898 s.e= .0886 $p<0.05$), indicating that respondents with higher financial literacy will have an improved financial behaviour than respondents having lower financial literacy. The path (direct effect) from financial self-efficacy to financial behaviour is positive and significant (b=.4521 s.e= .0715 $p<0.005$), indicating that respondents with higher financial self-efficacy will have an enhanced financial behaviour than respondents having lower financial self-efficacy. The bootstrapping analysis also revealed that there is a significant mediating effect (0<BooTLLCI<BooTULCI).

Further, the researcher analysed the proportion of the indirect effect of financial literacy. For this the indirect effect of X on Y through financial M (0.3379) is divided by the total effect of X on Y (0.5277).

Hence it can be concluded that the proportion of the total indirect effect of financial literacy on financial behaviour is 64.03%.

5. Discussions

In this study, financial literacy (FL) was used to predict financial behaviour (FB) which was tested through linear regression and the results suggest that financial behaviour can be predicted by an investor's financial literacy. The findings are in line with many studies conducted by many researchers, in various parts of the world. Adams & Rau (2011) emphasized that financial literacy can predict financial behaviour of an investor, especially when it comes to retirement planning. In another study, Van Rooij, Lusardi, &Alessie, (2011) examined the role of financial literacy in financial decision making and concluded that investors with lower financial literacy are less likely to invest in stocks than people with a higher level of literacy. Financial literacy not only makes investors aware of the investments options but also educates them about the skills, attitude and knowledge which is essential to make apt investment decisions. It further influences the financial behaviour which includes earning, spending, savings, investing and borrowing capacity of an investor (Nelson & Wambugu, 2008). Researchers claim that financial behaviour can be, to a large extent, predicted by the financial literacy of an investor which leads to fundamental awareness and knowledge helps an investor to plan to save and invest (Hilgert, Hogarth, & Beverly, 2003, Lusardi, 2008). Hence it can be stated that most of the studies conducted in the area have shown both correlations as well as causality between financial literacy and financial behaviour.

Though financial literacy is an important factor to predict financial behaviour, it should be accompanied by financial self-efficacy. The studies conducted in the past have extensively studied the importance of financial knowledge in shaping a positive and improved financial behaviour, but it should be accompanied by financial self-efficacy; which has been examined by only a few studies. When accompanied by financial self-efficacy, financial behaviour, leads to higher level of financial satisfaction of an investor (Rothwell, Khan, &Chern, 2016). The association between knowledge and action is strengthen by self-efficacy (Bandura, 1982), which was confirmed in this study.In addition, to motivate desirable financial behaviour, emphasis should be placed on both financial literacy as well as financial self-efficacy (Xiao, Chen, & Chen, 2014). Babiarz and Robb (2014), in their study, analyzed the emergency funds maintained by households. It was found that individual households having more knowledge and financial self-efficacy are more likely to have emergency funds. Thus, positive financial behaviour can be encouraged through improved financial literacy and increased financial self-efficacy (Rothwell, Khan, &Chern, 2016).

6. Implications

The findings of the current study are significant at both, the individual and group level. The understanding that financial self-efficacy can strengthen the impact of financial literacy on financial behaviour and suggests that any initiative to improve literacy levels, must also be accompanied with tools to improve efficacy levels. Many initiatives have been taken by different government and non-government organizations to increase the level of literacy among the individuals, but the results do not show any significant impact on the behaviour of the people. The reason for the same could be attributed to the lack of confidence or belief among the investors in their capability to make sound financial decisions

7. Limitations

Every study has its own limitation and this study is not an exception. The study is based on salaried class investors living in Bengaluru, and hence it may not be universally applicable. The sample size of the study is small and excludes business class investors. The study examines only two variables to study the financial behaviour of an individual investor, but there are many other variables like behavioural biases, risk perception, risk tolerance and other personal factors that may have an impact on the financial behaviour of an investor; which are not included in this study. The data was collected through self-administered, structured questionnaire and hence the responses could be biased.

8. Conclusion

Irrational financial decisions are often due to low level of financial literacy but it should also be accompanied with financial self-efficacy for investors to make prudent financial decision. A positive moderate correlation between financial self-efficacy, financial literacy, and financial behaviour was found. It was also found that financial literacy has a significant positive impact on financial behaviour; which is mediated by financial self-efficacy. This study builds on the existing literature on the relationship between financial literacy, financial self-efficacy and financial behaviour. The study emphasizes the mediating role of financial self-efficacy and how this factor should be included in studies measuring financial behaviour or financial well-being of an individual investor. As the life expectancy of an individual is increasing, it is very important to have basic financial literacy and also have the confidence to make informed financial decisions, which ultimately improves the financial behaviour. Individuals need to take control of their finances to avoid falling prey to fraudulent practices and exploitation. Financial literacy helps the investor to understand various financial products and services available in the financial market and choose the best alternatives for them. A strong financial literate population will not only impact the financial well-being of the individuals but will also create a financially healthy society.

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