Does Gender Impact on Relationship between Financial Self-Efficacy and Financial Satisfaction in Financial Management?

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Abstract

This study analyzes the relationship between financial self-efficacy and financial satisfaction with a particular emphasis on examining whether this relationship is moderated by gender. The study adopts a quantitative research approach and employs an online survey to gather data from a sample of 216 participants. Structural equation modeling is employed to examine the direct effect of financial self-efficacy on financial satisfaction and the moderating effect of gender on this relationship. The results show that financial self-efficacy has a significant positive impact on financial satisfaction and gender moderates this relationship with women exhibiting a stronger relationship between financial self-efficacy is an important predictor of financial satisfaction for both men and women, but gender differences should be taken into account when examining the relationship between these variables. The study highlights the importance of financial self-efficacy, particularly for women who may experience greater barriers to financial inclusion.

JEL Classification Codes: G11, G41, O3

1. Introduction

The investment market is a complex and constantly evolving environment where investors are required to make decisions based on their financial knowledge, experience and confidence. With the increasing availability of investment options and the volatility of the market, investors often experience a range of emotions that can impact their investment decisions. One of the important factors that is considered to influence financial satisfaction of an investor is financial self-efficacy (FSE) or an individual's belief in their ability to manage their finances successfully. It has received increased attention in the field of behavioral finance (Bandura, 1991). Research has shown that individuals with higher levels of financial self-efficacy are more likely to engage

in proactive financial behaviors. Individuals with a greater financial knowledge, experience higher levels of financial satisfaction (Marlatt et al., 1997). It is a key component of financial literacy and has been found to be associated with various positive financial outcomes including higher levels of financial satisfaction (Farrell et al., 2016).

Financial satisfaction, on the other hand, is a subjective evaluation of an individual's overall contentment with their financial situation (Clark et al., 2008). A growing body of research has investigated the relationship between financial self-efficacy and financial satisfaction with many studies suggesting that higher levels of financial self-efficacy are associated with greater financial satisfaction. For instance, a study by Cannon et al. (2022)found that individuals with higher levels

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of financial self-efficacy reported higher levels of financial satisfaction. Similarly, a study by Dare et al. (2022) found that financial self-efficacy was positively associated with financial satisfaction among the Korean households. A study by Nadeem et al. (2020) found that individuals with higher levels of financial self-efficacy reported higher levels of financial satisfaction. Other studies have replicated these findings across different cultures and populations, suggesting that the relationship between financial self-efficacy and financial satisfaction is robust and generalizable (Khan et al., 2021).

Understanding the relationship between financial self-efficacy and financial satisfaction is important for several reasons. First, financial satisfaction is a critical component of overall wellbeing and linked to better mental and physical health outcomes (Hu et al., 2021). Second, financial self-efficacy is a malleable factor that can be improved through various interventions such as financial education programs and counseling (Qamar et al., 2016). Finally, individuals with higher levels of financial self-efficacy may be more likely to engage in positive financial behaviors such as saving and investing, which can lead to a greater financial security and well-being over time(Lim et al., 2014).

Despite the growing body of research on the relationship between financial self-efficacy and financial satisfaction, there is a need for further research to examine the factors that may moderate or mediate this relationship. One such factor that has received little attention in the literature is gender. While some studies have found that gender does not significantly moderate the relationship between financial self-efficacy and financial satisfaction e.g. (Farrell et al., 2016), others have suggested that there may be gender differences in the way that financial self-efficacy impacts financial satisfaction (Shim et al., 2012). Gender differences in financial behaviors and attitudes have been documented in the literature with women often reporting lower levels of financial self-efficacy and financial satisfaction than men. These differences may be due to socialization processes that lead to different expectations and experiences in financial decision-making. Given the potential influence of gender on the relationship between financial selfefficacy and financial satisfaction, it is important to investigate the moderating role of gender in this relationship.

The present research aims to explore the impact of financial self-efficacy on financial satisfaction and the moderating role of gender in this relationship by answering the following research questions. What is the relationship between financial self-efficacy and financial satisfaction? How does gender moderate the relationship between financial self-efficacy and financial satisfaction? Are there any differences in financial self-efficacy and financial satisfaction between men and women in the sample population? This research is contributory to the existing literature on financial self-efficacy and financial satisfaction by providing insights into the impact of gender on this relationship. The findings may also inform interventions that support the development of financial self-efficacy and promote financial satisfaction particularly among women.

This paper is structured as follows. Section 2 presents the theoretical background of the study and the basis on which the hypotheses are developed. Section 3 contains the methodology employed such as theoretical model, data collection, questionnaire design, and statistical tools and techniques used. Section 4 presents the results and analysis. Section 5 concludes with implications.

2. Theoretical background

The theoretical framework that underpins the current study is Bandura's self-efficacy theory (Bandura, 1991). This theory proposes that an individual's belief in their ability to successfully perform a particular behavior or task, also known as self-efficacy, influences their motivation, behavior, and ultimately, their outcomes. In the context of financial decision-making, self-efficacy can be seen as an individual's belief in their ability to make effective financial decisions. Specifically, individuals with higher levels of financial selfefficacy are more likely to engage in positive financial behaviors, such as budgeting, saving, and investing, and are more likely to achieve better financial outcomes, such as financial satisfaction and well-being. Our focus is to introduce gender into this analysis.

3. Methods

3.1. Sampling and Data Collection

This study uses a quantitative research design and a cross-sectional survey approach to collect data to investigate the relationship between financial self-efficacy and financial satisfaction and how gender moderates this relationship. Through the use of the statistical method known as structural equation modelling (SEM) and the covariance-based software analysis of moment structure (AMOS), this research evaluates the suggested relationship. In management research, SEM is the most suitable and well supported tool for studying the intricate links between behavioral causes and effects (Nusair et al., 2010). The convenience sampling strategy is employed in this research. Using the 1:10 (item to responders) ratio standard proposed by Hair et al. (2010), the sample

size for the research is determined. We used the (Kaiser-Meyer-Olkin, 2017) test of sampling adequacy to further confirm that our sample size is sufficient for the parametric statistical analysis. The outcome (0.868) showed that the sample size is appropriate (Field, 2009).

Sample for our study is Indian stock market investors. Data is collected using an online structured questionnaire. Major items in the questionnaire are given in Annexure 1. The questionnaire was canvassed by personal visits, emails, and social media networks like LinkedIn to stock market investors in several cities (Srinagar, New Delhi, Chennai, Mumbai, Bangalore, and Mohali) in order to acquire a more representative sample. With the aid of numerous brokerage and investment firms in India, the information on stock market investors was gathered. Additionally, stock market investor communities found on the social media platforms were sourced for data collection. The investors who participated in the poll represented a different range of ages, professions, educational backgrounds, and income levels. The field work was conducted during the months of December 2023- April 2023. The study used convenience sampling technique followed by snowball sampling. In total, 250 stock market investors were asked for their responses but some of the responses had to be dropped due to incomplete information provided. As a result, final sample includes 216 investors.

3.2. Data descriptions

The socio-economic and demographic background of sample respondents are shown in Table 1.

Demographic Characteristic	Number of respondents	Percentage of respondents to total respondents (216 investors)		
Gender				
Male	118	55		
Female	98	45		
Age (years)				
18-28	86	39.8		
29-38	38	17.5		
39-48	55	25.4		
49 and above	37	17.1		
Marital status				
Married	75	30		
Unmarried	141	70		
Income level (Rs)				
Below 20k	30	13.8		
20k - 50k	86	39.8		
50k - 1 lakh	72	33.3		
Above 1 lakh	28	12.9		

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Source: Authors' survey

3.3. Measurement

Financial self-efficacy and financial satisfaction are measured and quantified by following methods.

Financial self-efficacy: This is quantified by 6-item scale developed by Lown (2011). Responses are measured on a 4-point Likert scale ranging from "not at all true" to "entirely true". Some examples of items used in the financial self-efficacy scale are: "It is challenging to make progress toward my financial goals", "When faced with a financial challenge, I have a hard time figuring out a solution" etc.

Financial satisfaction: This is measured by 8-item scale developed by (Joo et al., 2004; Kalra Sahi, 2013). Responses are measured on a 4-point Likert scale ranging from "never" to "always". Some examples of items used in the financial satisfaction scale are: "I am satisfied with present

level of savings", I am satisfied with my ability to handle family's financial emergencies" etc.

4. Data Analysis and Results

4.1. Common method bias

Common method bias is a type of measurement error that occurs when the method of data collection influences the responses or results in a systematic way. It is relevant because it can lead to inaccurate or biased findings in research, affecting the quality and reliability of the study. By identifying and addressing common method bias, researchers can improve the validity of their results and draw more accurate conclusions. Harman's singlefactor test is used to determine common method bias. The total variance obtained by a single factor is 35.77% which is less than the 50% cutoff value. As a result, common method bias is not an issue in our study.

4.2. Reliability and validity

Reliability means that a measurement or test consistently gives similar results when repeated. In other words, it is about the consistency and dependability of the data collected. Validity is about whether the measurement or test truly measures what it's supposed to measure. It checks if the results are accurate and appropriate for the research. In this context, reliability and validity are essential to ensure that data and measurements are trustworthy and meaningful. Convergent validity means that different measurements of the same concept should be highly related. If we are measuring the same thing in various ways, they should show similar results. Discriminant validity, on the other hand, checks if measurements of different concepts are not too closely related. It ensures that we can distinguish between different variables, as they should not overlap too much.

To assess the reliability of the variables, Cronbach's alpha and composite reliability (CR) are used. The Composite Reliability (CR) values and Cronbach's alpha for all the variables exceeded the recommended threshold of 0.700, as outlined by Nunnally (1994).Composite reliability is measured by using the Gaskin and Linn statistical package tool (2016). The composite reliability of the variables exceeded the threshold value of 0.7, with a range from .787 to .961 (Hair et al., 2010). Gaskin and Linn's master validity technique is used to assess the convergent validity of scale items. Further our study utilized the average variance extracted (AVE) to establish convergent validity (Fornell et al., 1981). The Average Variance Extracted (AVE) values for all the constructs in the study exceeded the established threshold of 0.500. As a result, the measures used in this paper provide the necessary convergent validity. The Heterotrait-Monotrait (HTMT) ratio is employed to assess the discriminant validity of the scale. All of the readings fell below the 0.85 cutoff (Henseler et al., 2015). The results are shown in Table 2.

Construct	Factor	Alpha	CP	AVE	
Construct	loading	Агрпа	CK	AVL	
FSE1	.756	.974	.886	.724	
FSE2	.823				
FSE3	.799				
FSE4	.927				
FSE5	.869				
FSE6	.748				
FSAT1	.832				
FSAT2	.864				
FSAT3	.958				
FSAT4	.790				
FSAT5	.788	.952	.963	.857	
FSAT6	.823				
FSAT7	.922				
FSAT8	.805				

Table 2: Factor loadings, reliability, andconvergent validity

Source: Authors' survey

"Factor loading" indicates how well each question or item relates to its underlying construct. Higher values mean a stronger connection. "Alpha" is a measure of internal consistency; values above 0.7 are generally good. "CR" (Composite Reliability) measures how well the items of a construct hang together. Higher values are better. "AVE" (Average Variance Extracted) tells us how much variance the items in a construct explain. Values above 0.5 are considered good. In our table, most factor loadings are high, indicating strong connections to the construct. For "Alpha" and "CRE," the values are above 0.7 and close to 1, which is very good. The AVE values are mostly above 0.5, which suggests that the items within the construct explain much of the variance. These results generally indicate that the constructs in our study are reliable and valid.

4.3. Measurement Model

A measurement model is like a map that shows how different questions or items in a survey are related to the concepts we want to study. It's relevant because it helps us ensure that the questions we use are a good fit for measuring what we want to understand. The results in Table 2, including factor loadings, alpha, CRE, and AVE, are all part of this measurement model. They tell us how well the questions or items work together to accurately measure the concepts we are interested in. Thus, the quality of this model depends on the results in Table 2.

AMOS or "Analysis of Moment Structures" a software program is used in structural equation modeling (SEM) for statistical analysis to estimate confirmatory factor analysis (CFA) and study's measurement model. Factor loadings are calculated for each item as part of the CFA, and the results are shown in Table 2. All factor loadings are seen to be more than 0.7 in the findings, indicating that the factor removes enough variation from the variable. In addition, all values for the model fit indices (CMIN/df, RMSEA, CFI, GFI, and TLI), used to assess the overall goodness of fit of the models, are within their respective permitted limits. In Table 3, CMIN/df (Chi-Square Divided by Degrees of Freedom) assesses the goodness of fit by comparing the model's Chi-square statistic to the degrees of freedom. A smaller CMIN/df value indicates a better fit. However, this index can be sensitive to sample size, so it's often used in conjunction with other fit indices. RMSEA (Root Mean Square Error of Approximation) measures the discrepancy between the model and the observed data. A lower RMSEA value suggests a better fit. Values less than 0.05 indicate a good fit, while values between 0.05 and 0.08 are considered acceptable. CFI (Comparative Fit Index) measures how well the model fits compared to a baseline model, with values closer to 1 indicating a better fit. A CFI of 0.90 or higher is often considered a good fit. GFI (Goodness of Fit Index) measures the proportion of variance and covariance in the data that the model explains. A higher GFI suggests a better fit, with values close to 1 indicating a good fit.TLI (Tucker-Lewis Index) compares the fit of the model to a null model, with values closer to 1

indicating a better fit. A TLI of 0.90 or higher is often considered a good fit. As shown in Table 3, a satisfactory model fit is obtained for financial self-efficacy, and financial satisfaction. Thus, the measurement model's results above show that the overall model provides a better match and as a result, the model is suitable and provides a good fit for the observed data.

Fit Indices	Obtained value
CMIN/df	3.101
RMR	.044
CFI	.921
TLI	.917
RMSEA	.069
GFI	.934

Table 3.Model fit indices

Source: Authors

4.4. Structural Model

A Structural Model is like a blueprint showing how different factors or variables interact with each other. It's relevant here because it helps us to understand the relationships between different variables we are studying, like how one variable affects another. The results in Table 2-3 provide the building blocks for this structural model. The results in these tables, like factor loadings and reliability measures, help us construct and validate the model.

A multi-group analysis is conducted to assess the moderating effect of gender on the relationship between financial self-efficacy and financial satisfaction. Initially, the model underwent separate evaluations for both male and female investors to ensure that each cohort exhibited a good fit. Subsequently, the two groups were compared with the variable group. Then, a constrained model with no structural parameters differing between the two subgroups of respondents is compared to an unconstrained model with all structural parameters that could be changed between the two subgroups. The statistical analysis conducted for both the Unconstrained and Measurement Residuals models indicated that both models were statistically significant (p < .05). The findings suggest that the association between financial self-efficacy and financial satisfaction is significantly influenced by gender. Table 4 displays the outcomes of the moderating effect. The findings reveal that the squared multiple correlation coefficient for financial satisfaction is 0.398. This suggests that a financial self-efficacy is responsible for explaining 39.8% of the variability observed in financial satisfaction. The findings suggest a significant and positive correlation between financial self-efficacy and financial satisfaction (b = 0.67, p = 0.01).

Variables	Financial Self -Efficacy	Financial Satisfaction	Gender
Financial self-efficacy	1.00	0.67**	0.12
Financial Satisfaction	0.67**	1.00	0.25**
Gender	0.12	0.25**	1.00

Table 4. Correlation Matrix for Financial Self-Efficacy, Financial Satisfaction and Gender

** indicate that correlation coefficient is significant at 0.05

Source: Authors

As shown in the Table 4, there is a significant positive correlation between financial self-efficacy and financial satisfaction (r = 0.67, p < .01). This suggests that individuals who have high levels of financial self-efficacy are more likely to report higher levels of financial satisfaction. In addition, there is a significant positive correlation between gender and financial satisfaction (r = 0.25, p < .01), indicating that women tend to report higher levels of financial satisfaction compared to men. However, there is no significant correlation between gender and financial satisfaction (r = 0.12, p > .05).

4.5. Moderation Model

A Moderation Model measures the effect of a third variable on the relationship between independent and dependent variable by looking at the strength and nature of relationship between independent and dependent variable. It helps us to understand how one variable might influence the relationship between two other variables. It is relevant here because it allows us to investigate how gender make the relationship between financial self-efficacy and financial satisfaction stronger, weaker, or different in some way. This can provide deeper insights into our research and help us see how different variables interact.

We conducted an analysis to determine if there is a moderating effect of gender on the association between financial self-efficacy and financial satisfaction. The results are given in Table 5. Significant effects of gender (male, female) are observed on the proposed association. The findings suggest that there exists a gender-based disparity in financial status, with males exhibiting a higher level of financial self-efficacy compared to females.

Independent variable	Gender	В	CR	Significance level
Eineneicl celf office av	Male	-0.325	-3.22	0.004
r mancial self-efficacy	Female	-0.278	-2.98	0.013

Table 5: Results of Moderation Model

Note: B refers to regression coefficient and CR refers to critical ratio.

Source: Authors

5. Conclusion and implications

The findings of the study provide important insights into the relationship between financial self-efficacy and financial satisfaction, moderated by gender. The results showed that financial selfefficacy is positively associated with financial satisfaction, but this relationship is stronger for women than men. One possible explanation for this gender difference is that women face unique challenges in managing finances. For example, women are more likely to be paid less than men for the same work, and they also tend to take on a disproportionate amount of care giving responsibilities. These factors may impact their financial self-efficacy and, in turn, their financial satisfaction. Furthermore, socialization may also play a role in shaping gender differences in financial self-efficacy. Research has shown that women are often socialized to believe that they are less capable than men in financial matters. This could impact their confidence in managing finances, which could then impact their financial satisfaction.

The results of this study have important implications for financial education and counseling programs. Financial education programs should consider gender differences in financial selfefficacy and tailor their interventions accordingly. For example, programs could incorporate genderspecific strategies to enhance financial selfefficacy and financial satisfaction. The above results and implications should be qualified due to two limitations. First, crosssectional design which precludes drawing causal inferences. Second, reliance on self-reported data which could be subject to social desirability bias.

Nevertheless, overall findings suggest that financial education programs should consider gender differences in financial self-efficacy and tailor their interventions accordingly. Future research could use longitudinal designs to examine the causal relationship between financial self-efficacy and financial satisfaction, as well as explore the cultural context in which these relationships occur.

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ANNEXURE-1

Constructs	Item notation	Statements/ items		
	FSE1	It is hard to stick to my spending plan when unexpected expenses arise		
	FSE2	It is challenging to make progress toward my financial goals		
Financial self-efficacy	FSE3	When unexpected expenses occur I usually have to use credit.		
	FSE4	When faced with a financial challenge, I have a hard time figuring out a solution		
	FSE 5	I lack confidence in my ability to manage my finances.		
	FSE 6	I worry about running out of money in retirement.		
Financial satisfaction	FSAT 1	I am satisfied with my present level of savings		
	FSAT 2	I am satisfied with my ability to handle family's financial emergencies		
	FSAT 3	I am satisfied with my money available for future needs (house, children's education, marriage, own retirement etc.)		
	FSAT 4	I am satisfied with my ability to manage money to protect from inflation		
	FSAT 5	I am satisfied with my money available for meeting family necessities		
	FSAT 6	I am satisfied with my ability to save taxes/tax planning		
	FSAT 7	I am satisfied with my ability to pay back the amount of money owed (on debts, loans, credit card payments due, etc.)		
	FSAT 8	I am satisfied with my present level of income		

Major items in the questionnaire