Educators and Investments: How Financial Literacy Affects Diversified Investment Decisions Among School Teachers

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Abstract

This research examines how financial literacy influences the investment choices of secondary school teachers. Financial literacy is important for managing personal finances well, especially when it comes to making smart investment decisions. Although there is increasing interest in financial literacy, not much research has looked at the investment habits of secondary school teachers, who typically have steady incomes but varying levels of financial knowledge. This study uses a quantitative approach, surveying a group of secondary school teachers to measure their financial literacy and see how it affects their personal investment choices. The results show that teachers with higher financial literacy tend to make more diverse and informed investment decisions. These findings suggest that targeted financial education programs could help teachers make better financial choices.

Introduction

Making decisions is a mental process where we choose a plan from several options to reach certain goals (Agarwal et al., 2023; Fülöp, 2005). Research on decision-making has changed from seeing it as a battle between feelings and logic to understanding that rational decision-making has its limits (Glarum & Adrianopoli, 2020). Herbert Simon pointed out that our minds have limits in collecting and processing information for good decisions (Slovic, 1976). Studies have found that quick, emotion-driven decisions can sometimes be more effective and faster than logical ones (Glarum & Adrianopoli, 2020). The idea of semi-bounded rationality suggests using signal processing and artificial intelligence to fill in missing information and make more consistent decisions (Marwala, 2013). Despite technological advancements providing more information, human minds are designed for environments where information is scarce. As a result, people often rely on simple heuristics that ignore most available information and focus on a few important cues (Todd, 2007). These heuristics can be ecologically rational and effective in specific environments, suggesting that decision-making mechanisms should be considered in technology design to enable better choices (Todd, 2007).

In today's more complicated financial environment, it's very important to be able to make smart choices about your money. This is key for keeping your finances safe and building wealth over time. Financial literacy means knowing how to understand and handle your money well. The OECD says it includes being aware of financial matters, having the right knowledge and skills, and having the right attitudes and behaviors for making financial decisions (Colić, 2022). Lusardi adds that financial literacy means being able to use economic information to make good choices about saving, investing, and managing debt (Lusardi, 2015). Mihalčová and colleagues emphasize that financial education is very important for helping young people learn

how to make good decisions, as shown by PISA tests (Mihalčová et al., 2020). Huston (2010) talks about how measuring financial knowledge helps us see how it affects people's financial situations. Delgadillo (2014) notes that there isn't a clear agreement on what terms like financial education and capability mean, and they are often used in the same way. Understanding personal finance is important because it helps people make smart choices that can improve their financial health.

Studies show that teachers are a key group to study when looking at financial literacy. Compared to college students, teachers usually have better financial knowledge (Németh et al., 2022). But they might not know much about financial systems (Sayım & Serdar, 2020). Things like their financial knowledge and attitudes greatly affect how financially literate they are (Estoconing, 2024). Research shows that teachers' financial literacy is very important to study. It affects not only their own financial health but also their ability to teach students about money matters. Some studies have found that teachers have different levels of financial literacy, with some showing more knowledge and better saving habits than expected (Németh et al., 2022). Yet, challenges remain, especially in long-term planning, saving, and keeping records (Kapenda, 2023). What affects teachers' money skills include their financial knowledge, attitudes, and personal background (Estoconing, 2024). Many public-school teachers face financial difficulties and often turn to informal borrowing (Casingal & Ancho, 2021). Looking at how teachers handle their money and make investment choices helps us understand the importance of financial literacy in these decisions.

This research focuses on understanding how financial knowledge influences the investment decisions of teachers. By examining their level of financial understanding and its impact on their investment choices, this study aims to shed light on the financial challenges and opportunities that educators face. The results of this research will also help in creating better financial literacy programs for this significant group.

This research aims to achieve three goals:

- **Objective 1**: Assessing financial literacy levels among secondary school teachers is covered by the independent variables: budgeting, saving, risk management, and investing. These factors together determine how well the teachers understand money matters.
- **Objective 2**: Analyzing the association between the independent variables and diversified investment decisions
- **Objective 3**: Recommendations for improving financial literacy and investment behaviors can be based on the outcomes of these relationships.

This paper will start by looking at what is already known about financial literacy and making smart investment choices, especially in the education field. It will then explain how we studied the financial knowledge and investment decisions of school teachers, share the results of our research, and talk about what these findings mean for teachers and people who make decisions about education.

Literature Review

Understanding money matters greatly affects how people manage their finances and make decisions. Research shows that people who know more about finances tend to handle their money better and plan for retirement more effectively (Refera, 2018; Rani, 2023). Those with higher financial knowledge are more likely to use their money wisely and stay financially healthy (Rani, 2023). How people feel about money and how confident they are in making financial choices also strongly influences their financial habits (Refera, 2018). Studies also find that different groups of people have different levels of financial knowledge and ways of managing their money (Tejero et al., 2019). Financial literacy helps people make better investment choices. People who are more financially literate tend to have better financial health because they can manage their money well and control their spending (Bai, 2023). These results highlight the need for financial education programs that teach people how to improve their financial attitudes and decision-making skills, which can lead to better financial health (Refera, 2018; Rani, 2023).

Teachers are very important in teaching financial literacy to society, but research often ignores their own financial knowledge. Recent research shows that teachers have a mix of good and not-so-good financial habits. A study found that 86% of teachers save money beyond just putting it in a bank, which shows they are quite aware of their finances (Németh et al., 2022). However, another study found that many teachers have trouble with financial skills, especially when it comes to making important financial choices (Nerona, E. M. C. L. M., PhD. (2023).

Notwithstanding their vital position in society, teachers have frequently been disregarded in studies on financial literacy. Studies keep showing that, even though teachers know a lot about their subjects, they often don't have enough knowledge about managing their own money. Research in various countries, such as Australia, the Philippines, and Ghana, shows that both experienced and future teachers have limited financial knowledge (Gallery et al., 2011; Cm et al., 2017; Matey et al., 2020). This lack of knowledge can harm their personal money management, investment choices, and retirement plans (BenDavid-Hadar, 2015; Matey et al., 2020). The effects go beyond just the teachers themselves, potentially influencing their students' financial understanding and, in turn, the overall economic health of their countries (Cm et al., 2017). In India, a lot of research has been done on general financial knowledge and different investment choices, but there are not many studies that focus on teachers as a particular group. Additionally, few studies examine how financial literacy specifically influences their personal investment decisions considering financial literacy sub–variables: budgeting, saving, risk management, investing, investment decisions sub-variables - diversification, risk tolerance, professional advice, and confidence in investment.

Financial literacy has a significant impact on investors' ability to reason and decision making processes. Research has found that better financial understanding leads to smarter investment choices (Shroff et al., 2024; Prasad et al., 2020). People with more financial knowledge tend to make better decisions and are less likely to make mistakes due to common biases (Carpentier & Suret, 2012). Financial knowledge includes knowing how to manage money, save, handle risks, and invest, all of which are important for making good investment decisions. Different countries have found that people have different levels of financial knowledge. In Saudi Arabia, people are quite good at budgeting, managing debt, and saving, but they are only average at

investing and understanding insurance (Al Rahahleh, 2022). Similarly, in Nepal, financial literacy positively influenced investment decisions in the share market, with personal saving, risk tolerance, and financial knowledge playing crucial roles (Subedi, 2023). Financially literate people have a greater tendency to make wise investment decisions, according to research conducted in India that found investors had moderate to high degrees of financial literacy (Shroff et al., 2024).

Hypothesis

H1: There exists a significant positive association between budgeting skills and the likelihood of making diversified investment decisions.

H2: Higher levels of saving are positively correlated with higher diversified investment decisions.

H3: Teachers with better risk management skills are more likely to take diversified investment decisions.

H4: Greater knowledge of investing is positively correlated with diversified investment decisions.

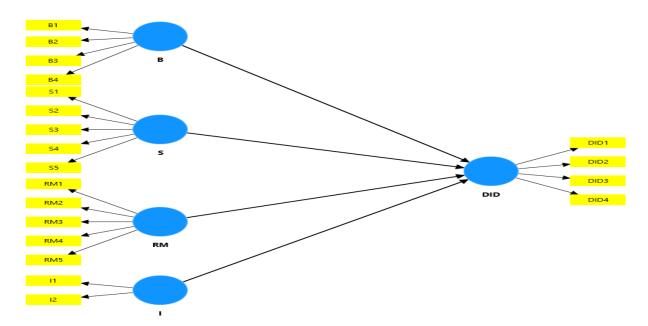


Figure: 1 Research Model

Methodology

Research Design

To operationalize the constructs in our study, we adopted measurement scales from established literature. Budgeting was measured using objects from Chen and Volpe (1998); saving from Lusardi and Mitchell (2011); risk management from Grable (2000); investing from De Bassa Scheresberg (2013); diversified investment decisions from Statman (1987); risk tolerance from Grable and Joo (2004); and professional advice from Schepen and Burger (2022). To enhance

response rates, the number of items was reduced. Consistent with prior research, all items were assessed on a Likert scale with five points. Data was gathered via a web-based survey utilizing snowball sampling to ensure a more homogeneous sample of teachers from various government and private schools in Ghaziabad.

53.7% of the sample is composed of females and 46.35 are representative of males, 85.0% are married 11.7% are unmarried and 3.3% are widower or divorced. With 80% of the respondents are post graduate, 17.7 are graduates and 2.3% are PhDs. Partial least squares (PLS) approach with Smart PLS software 4 was employed to evaluate the model. PLS does not require rigid normal distributions of data in order to represent latent variables. This method is suitable for the investigation, which aims to identify the primary drivers of the constructs. To evaluate the measurement model, we began with a confirmatory phase.

We performed factor examination to ensure that all constructs were legitimate. The factor loading for each metric is displayed in table 2. We check the reliability of variables using Cronbach's Alpha, and we also check the composite reliability. The average variance extracted (AVE) is often used to measure convergent validity in confirmatory factor analysis. A value of 0.5 is usually seen as good enough (Mehmetoglu, 2015). This standard is backed by Kundu et al. (2023).

Table 1: Reliability of latent variables (CA indicates Cronbach's _; CR indicates Composite reliability; AVE indicates Average Variance Extracted)

Latent Variables	CA	CR	AVE
Budgeting	0.765	0.849	0.585
Diversified Investment Decisions	0.788	0.863	0.612
Risk Management	0.839	0.886	0.609
Investing	0.837	0.884	0.604

To assess discriminant validity, we start by comparing the Average Variance Extracted (AVE) and the Shared Variance between variables, as recommended by Fornell and Larcker (1981). Although the Fornell and Larcker method is commonly used, the heterotrait-monotrait (HTMT) ratio of correlations has become a stricter alternative (Ab Hamid et al., 2017). The HTMT criterion has proven effective in identifying possible issues with discrimination among latent variables and improving construct validity (Yusoff et al., 2020).

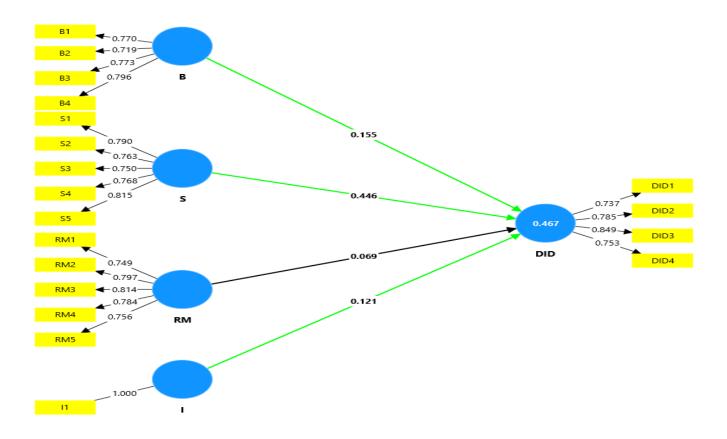


Figure 2: Sample results (N=460). The green lines indicate accepted theories.

Results

First, we analyzed the sample. Table 5 displays the path coefficients and significance of the structural model for the entire sample, and Figure 2 visually presents the results.

Construct Validity and Outer Loadings: The outer loadings for each indicator were significant (p < 0.01) and greater than 0.7, confirming that the indicators effectively represent their respective constructs. These loadings show that each item accurately measures its construct, supporting strong indicator reliability.

Table 2: Construct measures validity. Loading values are all significant at p < 0.01.

Budgeting	Mean	Sd	Outer loadings
B1: I regularly create a budget to manage my income and			
expenses	0.769	0.026	0.770
B2: I allocate a portion of my income toward savings or			
investments after budgeting.	0.719	0.033	0.719
B3: I find it easy to stick to a budget without			
overspending.	0.772	0.025	0.773

B4: I revise my budget regularly based on changes in my			
income or expenses	0.797	0.021	0.796
Diversified Investment Decision			
DID1: I diversify my investments across multiple asset			
types (e.g., stocks, bonds, real estate).	0.736	0.029	0.737
DID2: I regularly review and adjust my portfolio to			
maintain a balanced mix of investments.	0.785	0.022	0.785
DID3: I am comfortable with taking calculated risks in my			
investment decisions.	0.849	0.013	0.849
DID4: I believe my investment decisions will lead to			
positive financial outcomes.	0.752	0.024	0.753
Investing			
I1: I regularly invest in financial products to build wealth			
for the future.	1.000	0.000	1.000
Risk Management			
RM1: I understand the concept of financial risk and how it			
affects my investments.	0.748	0.025	0.749
RM2: I am comfortable evaluating the risks associated			
with different financial products.	0.796	0.018	0.797
RM3: I diversify my investments to manage risk			
effectively.	0.813	0.019	0.814
RM4: I have insurance or other safety nets to manage			
financial risks in my life.	0.783	0.019	0.784
RM5: I feel confident in my ability to assess and manage			
the risks of investment options.	0.756	0.023	0.756
Saving			
S1: I prioritize saving money for future financial goals.	0.790	0.020	0.790
S2: I have a dedicated savings plan for long-term			
objectives like retirement or my children's education.	0.762	0.022	0.763
S3: I save a specific percentage of my monthly income.	0.750	0.025	0.750
S4: I feel prepared to handle unexpected financial			
emergencies due to my savings.	0.768	0.024	0.768
S5: I regularly contribute to my savings account without			
withdrawing for non-essential expenses.	0.815	0.015	0.815

Table 3: Fornell and Larcker's (1981) discriminant validity. The diagonal elements in bold indicate the square root of the average variance derived for the relevant construct.

Correlations					
	1	2	3	4	5
1: Budgeting	0.765				
2: Diversified Investment Decisions	0.561	0.782			
3: Investing	0.400	0.425	1.000		
4: Risk Management	0.646	0.509	0.410	0.780	
5: Saving	0.702	0.658	0.479	0.650	0.777

Discriminant Validity (**Table3 and 4**): In order to evaluate discriminant validity, **the Heterotrait-Monotrait Ratio** (**HTMT**) was investigated at on table 4. All construct pairs had HTMT values below the conservative cutoff of 0.85 (Henseler et al., 2015), indicating sufficient discriminant validity. **Fornell and Larcker's** (**1981**) criterion states that each construct's square root of AVE is higher than its correlated values with other constructs. This shows that each construct is distinct and has little correlation with the others, which further supports discriminant validity.

Table 4: Heterotrait-Monotrait Ratio (HTMT) (Henseler et al., 2015)					
	Budgeting	Diversified Investment Decisions	Risk Management	Investing	
Budgeting					
Diversified					
Investment Decisions	0.710				
Risk Management	0.458	0.474			
Investing	0.803	0.617	0.445		
Saving	0.872	0.793	0.525	0.772	

We used bootstrapping analysis with 5000 re-samples to the entire sample after validation and reliability verification to look at the model's structural validity (hypotheses testing).

Table 5: Outcomes of the hypothesis test (Sample N=460). One-tailed test.

Hypothesis/Structural path t-value p-value Result

Hypothesis/Structural path	b	t- value	P values	Result
H1: B -> DID	0.155	2.890	0.004	Accepted
H2: I -> DID	0.121	2.995	0.003	Accepted
H3: RM -> DID	0.069	1.486	0.137	Rejected
H4: S -> DID	0.446	8.407	0.000	Accepted

Hypothesis Testing and Structural Path Analysis:

H1: Budgeting (B) -> Diversified Investment Decisions (DID): The path coefficient for budgeting on diversified investment decisions is $\beta = 0.155$, with a t-value of 2.890 and a p-value of 0.004. This suggests a statistically significant positive relationship, supporting the hypothesis that budgeting positively influences diversified investment decisions.

H2: Investing (I) -> Diversified Investment Decisions (DID): The path coefficient for the impact of investing on diversified investment decisions is $\beta = 0.121$, with a t-value of 2.995 and a p-value of 0.003. This result confirms a positive and significant association between investing and diversified investment decisions.

H3: Risk Management (RM) -> Diversified Investment Decisions (DID): The path coefficient here is $\beta = 0.069$, with a t-value of 1.486 and a p-value of 0.137, indicating that there is no statistical significance to this impact. Thus, the hypothesis suggesting that risk management directly influences diversified investment decisions is rejected. In this sample, risk management does not have a notable impact on diversified investment decisions.

H4: Saving (S) -> **Diversified Investment Decisions (DID):** The path coefficient for saving on diversified investment decisions is $\beta = 0.446$, with a highly significant p-value of 0.000 and a t-value of 8.407. This strong positive result supports the hypothesis that diversified investing decisions are significantly and strongly influenced by saving.

The above results show that three out of the four tested relationships (H1, H2, and H4) have significant positive path coefficients, meaning that budgeting, investing, and saving each positively impact diversified investment decisions. The biggest impact comes from saving (H4), which has the strongest connection ($\beta = 0.446$) and is highly significant, meaning that saving is a key factor in encouraging people to make diverse investment choices.

On the other hand, risk management (H3) doesn't seem to have a noticeable effect on diversified investment decisions in this group (p > 0.05), suggesting that it might not be a direct influence on diversification strategies. This could mean that, although risk management is an important financial practice, its effects on diversification might be indirect or depend on the situation. More research might be needed to understand its role in various situations or its possible indirect effects through other factors.

Conclusion

The research shows that how schoolteachers manage their personal finances significantly affects their choices about spreading out their investments. Key factors include budgeting, investing, and saving, with saving being the most important. This suggests that teachers who save carefully feel more confident trying and handling different investment options. This emphasizes the need for financial education programs that focus on budgeting and saving skills, which are crucial for good investment management.

Interestingly, the absence of a strong connection between risk management and investment diversification implies that risk management might play a less direct role in shaping investment decisions. This suggests the need for a more thorough investigation into how risk management practices work together with other factors that influence investment choices.

The study has certain limitations. The sample size and the focus on schoolteachers in Ghaziabad may limit how well the results can be applied to a wider population. Also, the use of self-reported information could lead to biases, like people giving answers they think are socially acceptable or not fully understanding their own behavior. The research only looked at budgeting, investing, saving, and risk management, ignoring other factors such as market knowledge and economic conditions. Plus, its design doesn't allow us to see how financial behaviors and investment choices change over time.

Future studies can improve on these limitations by including a more diverse group of people from different age groups, income levels, and cultural backgrounds, which would make the

results more applicable to a larger audience. Adding more factors, like financial knowledge, economic conditions, and how willing people are to take risks, could give a deeper understanding of what influences people's choices in investing. Additionally, long-term studies would help researchers see how changes in budgeting, saving, and risk management affect investment choices over time, providing clearer insights into cause-and-effect relationships rather than just connections.

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