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FINANCIAL DECISION MAKING AND TRADING ACTIVITIES OF INVESTORS: ROLE OF FINANCIAL MANAGEMENT CHALLENGES AND DIGITAL FINANCIAL KNOWLEDGE IN RETAIL SECTOR

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Research Paper

Abstract: *This study explores the impact of financial management challenges, financial decision-making, and digital financial knowledge on the trading activities of retail store dealers in China's retail sector. Specifically, it examines how financial decision-making mediates and digital financial knowledge moderates the relationship between financial challenges and trading behaviors. Using a structured survey, data were gathered from a sample of 339 retail store dealers across various Chinese cities. The analysis was conducted through Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the structural relationships and measure the influence of each construct on trading activities. Results indicate that financial management challenges significantly influence trading activities among retail dealers. Financial decision-making plays a mediating role between financial challenges and trading behaviors, while digital financial knowledge moderates this relationship, enhancing the effect of financial management challenges on trading activities. This highlights the importance of both decision-making processes and digital knowledge in adapting to financial challenges within the retail sector. This study contributes to the understanding of financial behavior in the retail industry by showcasing the interaction of financial decision-making and digital financial literacy as mechanisms for managing trading activities amid financial challenges. These findings provide actionable insights for retail practitioners and policymakers focused on improving financial resilience and trading strategies in China's retail industry.*

Keywords: *Financial management challenges, Financial decision making, Digital financial knowledge, Trading activities of investors.*

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1. Introduction

Financial markets are constantly fluctuating and of a nature, which causes issues for investors while aiming at achieving their intended purposes, especially in modern days where financial management issues often come under the constraint of frequent changes. Investment and asset allocation and risk prevention for this sector, and keeping the capital safe to safeguard investment, have importance (Wijayanti et al., 2024) thus, they act by way of providing support and helping to make investments long-lived (Budiasih, 2024). As economies around the world grow and become increasingly integrated, investors are left facing an environment that has increasingly become highly volatile and unpredictable, at times causing economic shocks and changes in regulatory conditions (Li, 2024). Such demands that investors are not only able to engage in prudent financial decision-making but also have digital financial knowledge in place to make rapid adjustments as circumstances change (Lu et al., 2024). Such unparalleled opportunities in digital financial tools and technologies allow for unparalleled control and management of financial complexity in managing investments, though there is a need for unique skills and competencies required in the harnessing of such tools (Urefe et al., 2024). There is thus an interaction of financial management problems and complexities with financial decisions that necessitate trading behavior that calls for understanding on both personal and institutional investor sides, respectively, to cope in current markets (Ahmad, 2024). All such factors do interfere with investment which revolves around trading. First there would be liquidity constraint problems that cause a problem concerning smooth functioning of the market and are associated with a source of real information to come through (Risman, 2024). But even at this point again the use of digital financial literacy to enhance the trading program as with the expansion scale of online platforms, one finds many making use of such resources for support during on the spot analysis and thus taking decisions and therefore such demands for online support are far greater these days from various investments in stock markets, according to (Akour et al., 2024). Despite these improvements, a gap continues to exist in practice with respect to the impact of financial management challenges and financial decision-making processes on investor trading patterns when the moderating factor is represented by digital financial knowledge (Sentosa & Hermawan, 2024). This study attempts to bridge this gap by analyzing effects of financial management challenges on trading activities, studying a mediating role of financial decision-making, and searching for moderating influence through digital financial knowledge (Iram et al., 2024). These relationships become pivotal in today's data-driven financial landscape, where informed decisions help mitigate the risks involved in handling complex financial management issues, as cited by (Sofiyan, 2024).

This has been well discussed in recent literature in terms of spillover effects of financial management issues on the trading activities of investors, with an emphasis on the influence of financial constraints and market volatility on investor behavior (Samiun et al., 2024). Cash flow constraint and economic instability are some financial issues that usually make investors diversify into a risk-averse trading strategy. As depicted by different studies, high financial risk is associated with higher investor risk aversion and lower trading frequency (Sofiyan, 2024). This suggests, for example, that a study by (Dewa et al., 2024; Samiun et al., 2024) on risk-averse

investor behavior during financial turmoil indicates that investors cut trading volumes with greater preference for safer assets and that financial distress for the organization in terms of higher debt levels or less liquidity may also have bad news to the stock prices for such an organization as the investment and trading behaviors may be discouraged (Kubińska et al., 2023). These studies highlight the sensitivity of investor behavior to financial management challenges, as investors try to protect their portfolios from losses in uncertain environments (Anzalone, 2023). Another critical factor that shapes investor activities is financial decision-making, as many empirical studies have shown that well-informed financial decisions lead to more robust trading practices (Zakaria et al., 2023). It is seen by the researchers that financial decision-making skills well-established among investors raise trading activities as well as the returns together with proper re-allocations of assets (Rahayu & Aswin, 2023). This digital competency has been associated with high trading volumes and diversified portfolios, especially when the investors feel confident that they can use digital insights to make better decisions (Soebdhan, 2023). This means therefore that earlier research studies focus on how active trading results are enhanced through financial decision-making, particularly within the community of the informed investor through a digitized set up.

Although considerable amounts of work have been put into understanding the influences of the problems related to financial management on trade and related decision making, the critical areas remain neglected (Wahyuni & Hafiz, 2023). For instance, a flow of literature analyses the role that challenges related to the financial management has on investors but pays relatively little attention to whether this relationship can be moderated through financial decisions making (Jhonson et al., 2023). This facet still remains a largely underexplored area to define if the good decision-making skill will prevent the adverse outcome brought by financial problems towards the trading activities (Rane, 2023). In most of the cases, researchers just focus on obvious outcomes resulting from financial hardships, hence not looking on some of the middle results that may reduce the strengths brought by financial hardships (Haidari, 2023). Lastly, though this study revealed that the performance of financial decision-making practice depends on the involvement of trade, the question whether there is a mediation between relation which financial challenges have with trades is still vague (Mardikaningsih & Darmawan, 2023). It is crucial to uncover this mediating role and find a more detailed reason of how investors respond when exposed to financial pressures for, despite the growing efforts on the interaction, very scanty research has addressed such interaction (Iram et al., 2023). Moderation by digital financial knowledge between the challenges of management facing an investor and any given trading behavior is significant as well (Babajide et al., 2023). While studies have shown relevance in digital literacy upgrading investor decision-making and trading effectiveness, studies on the moderating influence of digital literacy on the relationship between financial challenges and trading are extremely limited. Since digital platforms are central to modern financial management, it is essential to determine how digital financial knowledge could influence investor reactions to financial challenges (Ren, 2022). Existing literature tends to treat digital financial literacy as an independent factor affecting trading behavior without looking into its potential in moderating the effects of financial management challenges (Bhatia et al., 2022). The gap might be addressed with important insights into how digital capabilities help investors mitigate risks associated with financial management challenges. Besides, most research has

focused on developed markets, with few studies of such phenomena in emerging economies whose financial management challenges and level of digital literacy are very different (Jenita et al., 2022).

This study is based on behavioral finance theory, which states that investment decisions are influenced by psychological factors, financial acumen, and perceived risk (Korsoff, 2022). Behavioral finance provides a framework for understanding how financial management challenges and decision-making processes shape investor behavior in trading activities. From this perspective, financial management pressures elicit emotional responses in the form of fear, hence risk-averse investor behaviors except when they have the right strategies to make good decisions and fight these forces (Rahayu et al., 2022). Moreover, the theory of planned behavior further reinforces this argument in that it shows that financial knowledge on digital platforms is what helps investors have a better handle on their finances especially in the face of financial pressures (Fan, 2022). This study, therefore seeks to examine the relationship that exists between financial management challenges, decision-making, and trading activities while at the same time analyzing the moderating effect of digital financial knowledge. This research is categorized into three objectives. It first examines the direct effect of financial management challenges on investor trading activities. It also examines whether effective decision-making can play a mediating role in the relationship, meaning that if financial challenges can be effectively mitigated, they might not have an impact on trading behaviors. Lastly, this study checks on the moderating role of digital financial knowledge: do high levels of digital literacy enhance investor resilience against financial management challenges? Addressing these objectives will contribute to understanding investor behavior in complex financial environments in terms of how digital competencies and decision-making skills can shape trading outcomes responding to financial pressures (Sari et al., 2022).

2. Literature Review

The retail industry poses some unique challenges, namely, the dynamic nature of the business environment, heavy demands from customers, and ever-changing market trends (Anshari et al., 2022). The first significant challenge the retailer faces is proper cash flow management because of the seasonal character of sales and the needs of inventory turnover (Daud et al., 2022). Although necessary to meet the demand of customers, high inventories also tie up huge amounts of capital and hence affect liquidity and the company's ability to react to sudden changes in the market (Weixiang et al., 2022). Retailers often need to balance cash flow with expenditures on essential operations like supply chain management, marketing, and technology upgrades-all of which are crucial to maintaining competitiveness (Ahmad, 2024). When cash flows are not well managed, there might be a strain of retail finances, which further threatens supplier relationships, payday obligation, and growth in businesses (Akour et al., 2024). Thin profit margins experienced in retail make efficient management crucial to avoid excessive debts and ensure sustainable retail businesses. Inaccurate demand forecasting is yet another enormous financial challenge in the retail sector, complicated by changing consumer preferences, uncertainty within the economy, and trends that are emerging through electronic

commerce (Iram et al., 2024). Misalignment of demand forecasts can result either in excess inventory that incurs storage costs and contributes to subsequent markdowns or in a complete stockout that results in direct customer dissatisfaction and revenue loss (Samiun et al., 2024). This further change toward online shopping compelled the retailers to spend a large amount of money in investing in digital media and omnichannel facilities that demand a significant capital investment alongside competition from electronic giants, besides the complexity associated with multi-channel digital selling and various shipping costs along with management of returns among others (Umar & Dalimunthe, 2024). There are retailers which have to operate under the highly globalized marketplace where in most cases, this can be subject to exchange rate fluctuations and supply chain dislocations (Sari et al., 2023). Cost structures influence the operations of the said retailers. As a result, there is a need to provide financial management for these myriad challenges to come up with a financial structure that eliminates risk while enhancing profitability under the dynamic environment (Kubińska et al., 2023).

Recent research shows the complex interplay of factors that influence financial decision-making. Digital financial literacy appears to be one critical predictor of financial decisions, with a direct relationship to how decisions are made, operating as a mediator for the relationship between skills and financial outcomes (Akour et al., 2024). Financial capability and autonomy also have significant mediating roles in financial decision-making and perceived well-being (Rahayu et al., 2022). It is as if, for example, investor decisions and behaviors can be markedly influenced by personal characteristics (Fan, 2022). The financial decision-making theories reflect various factors that can influence a theory, such as prospects and psychological factors, as displayed in Prospect Theory, as well as gender and social interactions as determinants of investment strategies (Rane, 2023). Together, these studies underscore the complexity of financial decision-making: reinforcing how nicely economic theory and behavioral insights complement each other and demanding even more work into the area.

Many studies indicate that for a long time, various challenges of financial management managed to influence investor psychology toward trading activities (Rahayu & Aswin, 2023). Studies have established that lack of liquidity, heightened risk, and macroeconomic instabilities characterize financial challenges (Wahyuni & Hafiz, 2023). Therefore, the investor becomes very cautious with high risk aversion to shocks of financial activities. For example, high interest rates and inflation influence the capital allocations as the investor holds down its trading strategy for minimizing losses (Rane, 2023). In addition, investors facing a higher level of financial uncertainty are likely to limit or diversify their investments in several industries to hedge against the fluctuations of the market (Mardikaningsih & Darmawan, 2023). Other empirical studies have shown that companies' financial distress or poor management directly discourages investors from investing, since investors tend to be cautious with firms whose financial stability is in question (Babajide et al., 2023). Therefore, it has been established that there is a connection between the challenges of financial management and trading activities, with most scholars pointing out that the challenges can lead to the dampening of investor confidence and, by extension, affect trading volumes. In this regard, it is possible to infer that the challenges of financial management constitute significant hurdles directly affecting the trading activities of investors (Bhatia et al., 2022). When

companies are experiencing financial hardships, the perceived risk associated with investments increases, and investors reduce their trading activities or follow more conservative strategies (Korsoff, 2022). According to the theory of behavioral finance, financial challenges impact trading behaviors because investors' responses often depend on perceptions of risk and the stability of investment choices (Fan, 2022). Accordingly, financial management issues are expected to take a huge role in dictating the trades of investors as such influences provide the environment within which risks will accrue to investors.

H1: *Financial management challenges significantly influence the trading activities of investors.*

The investor's decision over finance plays an essential role in influencing his or her trading activities, for these are assessments based on considerations of risks and returns involved as well as trends (Anshari et al., 2022). Many studies have been conducted about how well-informed financial decisions positively correlate with investor involvement, leading to higher trading activity and ultimately to higher returns on investments (Weixiang et al., 2022). Empirical evidence finds that investors who make strategically informed financial decisions, including asset allocation or portfolio rebalancing based on various financial analyses, are more likely to be engaged in higher trading activities (Budiasih, 2024). Studies also reveal that financial decision-making is positively related to a higher level of financial literacy. Investors with greater knowledge of the financial markets trade more and in larger quantities (Lu et al., 2024). For instance, studies proved that the ability to analyze financial statements and market trends has enabled investors to frequently buy and sell stocks, thereby directly linking the efficacy of a decision to trading activities (Ahmad, 2024). It will, therefore, be possible for investors to engage themselves more in trading activities on account of financial decision-making abilities since such decisions clearly outline the maneuvering power that investors possess in utilizing and exploiting the opportunities embedded within the markets (Akour et al., 2024). With enhanced financial decision-making powers, investors will generally make right decisions, thus engrossing themselves in as many trading activities as would any other investor who has been considered to possess limited ability for making financial decisions (Iram et al., 2024). By the rational choice theory, which states that people choose to do something to gain the highest benefit, a plausible statement can be given stating that financial decision making influences the trading behaviors due to maximizing the benefits it can acquire (Samiun et al., 2024). It thus is hypothesized that this decision on finance influences considerably the activities of the investors through trading as more active results come with the proper formulation of the decisions.

H2: *Financial decision making significantly influences the trading activities of investors.*

Because decision-making often serves as a mediator between financial constraints and investment actions, much attention has been given in finance literature to the mediating role of financial decision-making in the relationship between financial management challenges and trading activities (Umar & Dalimunthe, 2024). The research indicates that financial decision-making can reduce the negative impacts of financial management challenges, and investors apply their decision-making skills to effectively respond to financial pressures (Sari et al., 2023).

For example, it has been found that investors facing risky situations or financial pressure can develop strategic decision-making to rebalance their portfolios or alter any other investment so that it can level off trading activity (Kubińska et al., 2023). Furthermore, empirical analysis shows that the ability to make effective decisions enables an investor to better diagnose and solve financial management problems, thus allowing him or her to continue trading without having to stop trading because of financial constraints (Rahayu & Aswin, 2023). Empirical evidence also indicates that financial decision making may serve as a mediator that allows investors to continue trading with issues of financial management (Wahyuni & Hafiz, 2023). Adopting sound practices in making decisions would enable investors to scan and respond to challenges in financial management in ways that minimize the effects of such challenges on their trading habits (Rane, 2023). Cognitive theory argues that decision-making is critical for how individuals may respond to challenging situations (Mardikaningsih & Darmawan, 2023); thus, it is thought that the financial decision significantly mediates the relationship that exists between financial management challenge and trading activities, acting as an avenue through which investors are able to mitigate the presence of constraints on trading activities.

H3: *Financial decision making significantly mediates the relationship of financial management challenges and the trading activities of investors.*

The digital financial knowledge, therefore, emerged as the key moderating factor in financial behavior, especially in how investors face challenges and execute trading strategies (Babajide et al., 2023). The studies show that the better investors are in their digital financial knowledge, the more prepared they are in making good decisions and resilient in the face of challenges in managing finances (Bhatia et al., 2022). Research has shown that the digitally literate investor makes use of online platforms and digital tools to carry out real-time market analysis and manage their portfolios (Korsoff, 2022). Risks are determined using this approach, and it improves the trading activities because risks associated with financial information become easy to understand and even mitigated (Fan, 2022). Digital finance information empowers investors who quickly adapt to changes within the market and take opportunity spaces that would be almost impossible without digital insights (Anshari et al., 2022). Therefore, the role of digital financial knowledge in moderating financial challenges is well documented since it helps investors in making more proactive and informative trading decisions (Weixiang et al., 2022). The possibility of navigating financial management challenges with the help of digital financial knowledge suggests that it might significantly moderate the relationship between financial challenges and trading activities (Wijayanti et al., 2024). That will facilitate the better understanding, by investors, of hard information and make it better used in making investment and portfolio decisions, hence possibly making the impact of such challenges on trading behavior diminish considerably (Lu et al., 2024). From the theory of planned behavior perspective, knowledge and ability represent the two significant correlates for action and response to intended behavior (Risman, 2024). This suggests that digital financial knowledge would significantly moderate the relationship between financial management challenges and trading activities because it enables them to make the right trading decisions despite financial constraints.

H4: *Digital financial knowledge significantly moderates the relationship of financial management challenges and the trading activities of investors.*

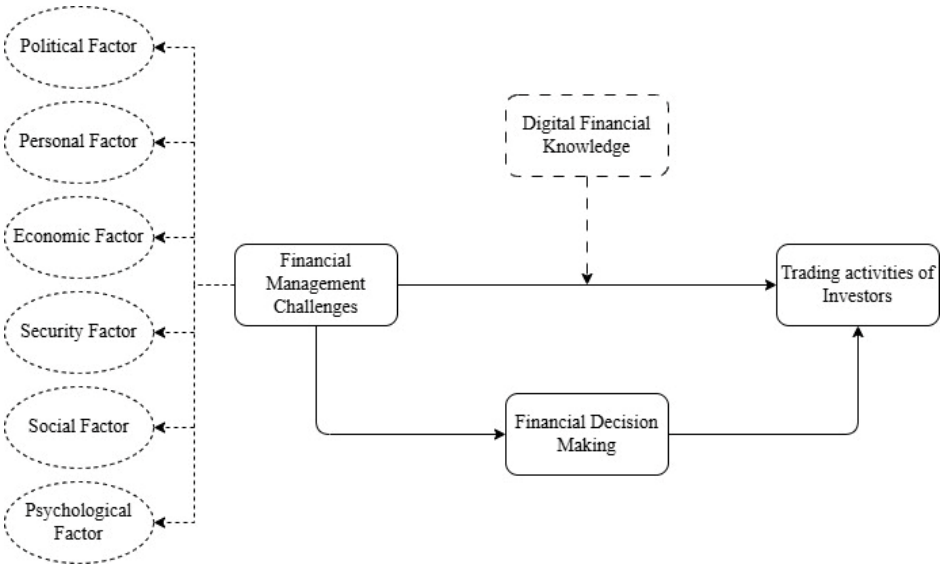

Figure 1: Research Model

3. Methodology

Using a quantitative approach, this study questioned the Chinese retail sector and its retailers to look into whether financial management problems, decision-making pertaining to finances, and knowledge on digital finance determine trading behaviors by retail store dealers in the retailing industry within China. It thus bases the research design on investigating structural relations that exist between the proposed variables and, thus are deemed to contribute highly towards shaping investor behaviors when operating amidst uncertainty in their financial endeavors. Data were collected by means of a structured survey questionnaire, and the technique of Partial Least Squares Structural Equation Modeling (PLS-SEM) has been used to analyze this survey. PLS-SEM is a strong method for testing complex models to ensure deep insights into the relationship between latent constructs. A total of 339 retail store dealers from several cities of China were sampled for this study. These respondents were selected with caution to allow for effective representation of the cross-section of the retail industry. In this regard, findings would be captured in terms of the different experiences dealers from various geographical and economic contexts. It was quite easy to allow the participation of respondents with the distribution of questionnaires both in person and online survey platforms. The sampling strategy ensured the presence of regional diversity as well as relevance since respondents were directly involved in financial decision-making and management procedures related to trading activities within the retail sector. Retail store dealers were chosen to be the target population for this research, with the active involvement in financial decisions and management practices that are very similar to the focus of the study on trading activities and financial management challenges.

The scales used in this study to measure the constructs were adapted from validated instruments found in existing literature. Adaptation ensured that both reliability and validity were captured in measuring the relevant dimensions of

financial management challenges, financial decision-making, digital financial knowledge, and trading activities. Each construct was measured with multiple items rated on the Likert scale, so that respondents can indicate the level of agreement with a number of statements concerning their experiences and practices. Financial management challenges were assessed through items that captured economic, political, personal, psychological, and security-related difficulties that retail store dealers encountered. Financial decision-making was measured by items that reflected participants' approaches and thought processes in managing and optimizing financial resources. Assessments for Digital Financial Knowledge came through questions that would seek the subjects' level of knowledge towards digital tools and technology in support of their finance. Trades were assessed based on measures of how frequent or/and active one was engaged in investment and the activities conducted by him or herself.

Table 1: Questionnaire details

Sr. No			
1	Financial management challenges	Seventeen	(Hossain et al., 2020)
2	Financial decision making	Eight	(Kumar et al., 2023)
3	Digital financial knowledge	Five	
4	Trading activities of investors	Three	(Khan et al., 2024)

PLS-SEM is robust in dealing with complex models, hence appropriate for prediction and exploration of the relationship between latent constructs for a relatively smaller sample size. This enabled the study to look at both direct and indirect effects of financial management challenges and financial decision-making on trading activities, including digital financial knowledge as a moderating factor. Analytically, the process in the article began with the assessment of measurement models to assess the reliability and validity of the constructs during the assessment of the outcome in a manner that testability and hypothesized relation for a structural model occur, where model fit statistics were calculated and evaluated against their path coefficients-the actual statistical measures of these strength relations and their probability or whether they are worthwhile-and provides a holistic appraisal on which factor affects each retail dealer trading behavior when their face with a financial challenge. In summary, through the combination of a structured survey and PLS-SEM analysis, this methodology approach represented an effective tool for probing the complex interrelationship between financial management challenges, financial decision-making, and trading activities, moderated by digital financial knowledge in the retail sector of China. This study contributes, through a rigorous analytical framework and widely established measurement scales, towards a better understanding of those factors that impinge upon retail investors' trading behavior, providing valuable insight for scholars, practitioners, and policymakers across financial management and the retail industry.

4. Results

Table 2 also provides the reliability and validity for every variable in the model that has Cronbach's Alpha above 0.7 as an indication of excellent internal consistency for constructs within them. The values also proved composite reliability above 0.7, further suggesting that the items used under each variable can actually represent the construct it's trying to measure reliably.

Table 2: Variables reliability and validity

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Digital financial knowledge	0.822	0.779	0.570
Economic	0.803	0.884	0.717
Financial decision making	0.759	0.828	0.545
Financial management challenges	0.893	0.910	0.506
Personal	0.823	0.797	0.576
Political	0.752	0.858	0.668
Psychological	0.866	0.720	0.571
Security	0.758	0.861	0.674
Social	0.731	0.882	0.788
Trading activities of investors	0.712	0.836	0.632

AVE values indicate that convergent validity is satisfactory because most of the variables have an AVE greater than 0.5, indicating that each construct accounts for a large amount of variance in its items. For instance, 'Economic' and 'Trading activities of investors' have AVE values of 0.717 and 0.632, respectively, indicating strong construct validity in the measurement model.

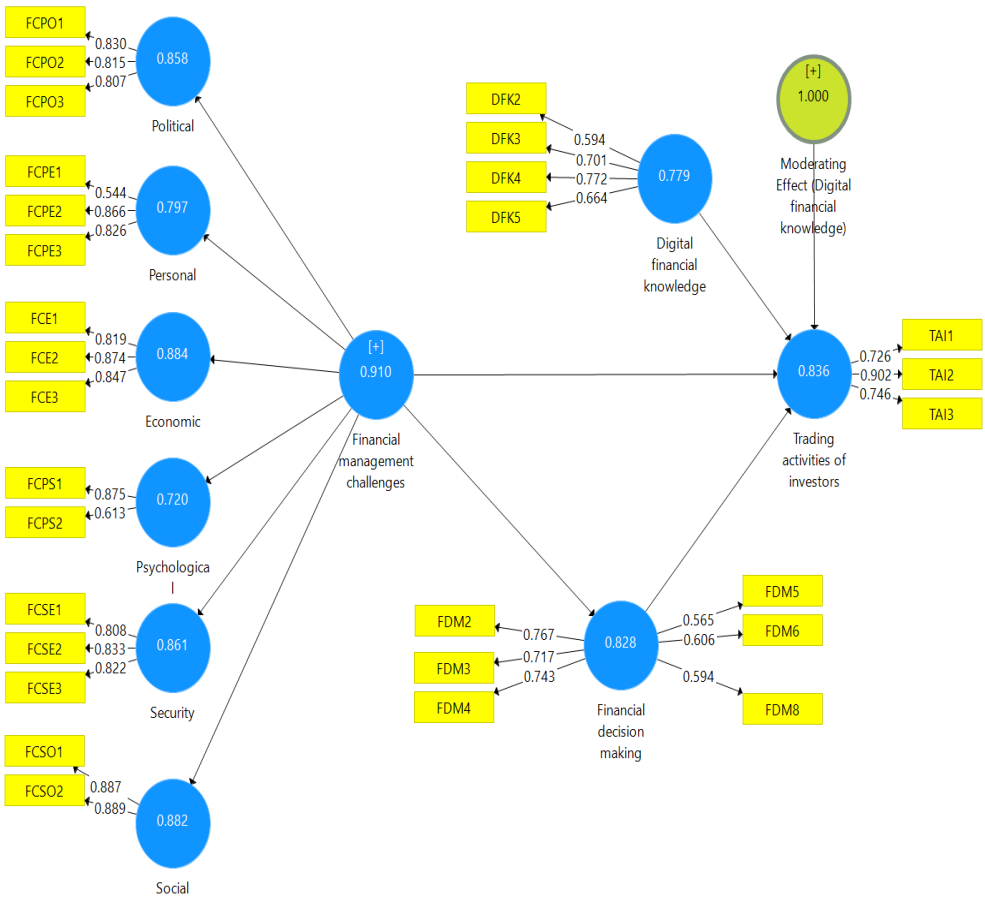

Figure 2: Estimated Model

Table 3 offers factor loadings of individual measurement items to their respective constructs. High factor validity is reported herein. Items are highly loading on their intended constructs, namely DFK3 and DFK4 with loading at 0.701 and 0.772 for 'Digital financial knowledge, which means that they really represent their underlying construct significantly. Similarly, FCE2 and FCE3 constructs show high loads on the 'Economic' factor as 0.874 and 0.847 respectively. In all these higher loadings across constructs there is a sign of good fit of a model, where each item contributes effectively for its designed variable, the validity of the measurement model increases along with clear differentiation of construct.

Table 3: Measurement Items Fitness Statistics

Factor	1	2	3	4	5	6	7	8	9
DFK2	0.594								
DFK3	0.701								
DFK4	0.772								
DFK5	0.664								
FCE1		0.819							
FCE2		0.874							
FCE3		0.847							
FCPE1			0.544						
FCPE2			0.866						
FCPE3			0.826						
FCPO1				0.830					
FCPO2				0.815					
FCPO3				0.807					
FCPS1					0.875				
FCPS2					0.613				
FCSE1						0.808			
FCSE2						0.833			
FCSE3						0.822			
FCSO1							0.887		
FCSO2							0.889		
FDM2								0.767	
FDM3								0.717	
FDM4								0.743	
FDM5								0.565	
FDM6								0.606	
FDM8								0.594	
TAI1									0.726
TAI2									0.902
TAI3									0.746

[1]Digital financial knowledge[2]Economic [3]Personal [4]Political [5]Psychological [6]Security [7]Social [8]Financial decision making [9]Trading activities of investors

Table 4 presents the Fornell-Larcker Criterion, which assesses the discriminant validity of constructs in this study. Diagonal values represent the square root of the Average Variance Extracted (AVE) for each construct, demonstrating the degree of variance captured by each construct relative to the variance shared with others. Constructs include Digital Financial Knowledge, Economic, Financial Decision Making, Financial Management Challenges, and others, revealing strong internal consistency as each construct's diagonal value exceeds the correlations with other constructs in its row and column.

Table 4: Fornell-Larcker Criterion

	1	2	3	4	5	6	7	8	9	10
Digital financial knowledge	0.686									
Economic	0.637	0.847								
Financial decision making	0.520	0.300	0.670							
Financial management challenges	0.713	0.899	0.377	0.637						
Personal	0.817	0.767	0.328	0.845	0.759					
Political	0.456	0.253	0.577	0.402	0.305	0.817				
Psychological	0.463	0.686	0.245	0.790	0.590	0.219	0.755			
Security	0.495	0.687	0.264	0.852	0.610	0.214	0.613	0.821		
Social	0.435	0.631	0.171	0.809	0.569	0.193	0.640	0.705	0.888	
Trading activities of investors	0.429	0.324	0.339	0.369	0.383	0.248	0.327	0.243	0.220	0.795

Table 5 indicates HTMT values that affirm discriminant validity because the values all remain below the threshold of 0.85. Values 0.875 were also for the relationship between 'Digital financial knowledge' and 'Economic', although bigger than the rest, the value is still below the threshold and implies a good enough discriminant validity level. This would affirm that each construct is unique and not overly overlapping with other constructs in such a way as to invalidate the constructs.

Table 5: Heterotrait-Monotrait Ratio (HTMT)

	1	2	3	4	5
Digital financial knowledge					
Economic	0.875				
Financial decision making	0.770	0.368			
Financial management challenges	0.717	0.727	0.522		
Trading activities of investors	0.624	0.414	0.420	0.491	

Table 6 reports the R-square for each one of the R-square of the model showing the statistical significance of variables in prediction. The given 'Economic' factor has its R-square reported as.808, stating that explanatory variables account for 80.8 % of 'Economic factor's; 'Trading activities of investors' has their R-square reported as '0.252', significantly lower as well. In addition to this, Q^2predict of 0.871 shows high predictive relevance, and RMSE and MAE values are given for supporting the model accuracy. All these statistics further show that the model fits perfectly and predictor variables explain the dependent variable variance highly.

Table 6: R-square statistics Model Goodness of Fit Statistics

Q^2predict	RMSE	MAE	R Square	R Square Adjusted
0.871	0.059	0.075		
Economic			0.808	0.807
Financial decision making			0.142	0.139
Personal			0.714	0.713
Political			0.162	0.159
Psychological			0.624	0.623
Security			0.726	0.725
Social			0.654	0.653
Trading activities of investors			0.252	0.241

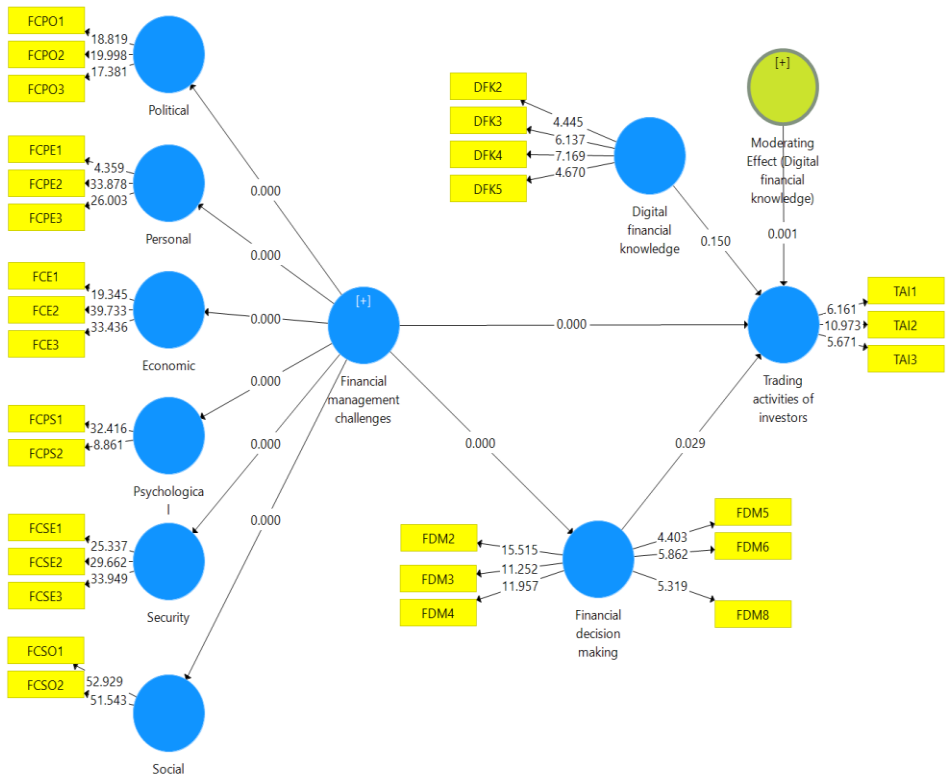

Figure 3: Structural Model for Path Analysis

Table 7 F-square value for all predictor variables in order to give an effect size for every dependent variable. 'Financial management challenges' has a high impact on 'Economic' (4.212) and moderate impacts on other variables, like 'Personal' (2.493) and 'Security' (2.655), indicating its critical role in influencing multiple constructs. The effect of 'Financial decision making' on 'trading activities of investors' also seems meaningful with an F-square of 0.190. Moreover, the moderating effect of 'Digital financial knowledge' on trading activities is small but significant, at 0.055, meaning it plays a supporting role in moderating financial management's influence on trading.

Table 7: F-Square

	Economic	Financial decision making	Personal	Political	Psychological	Security	Social	Trading activities of investors
Digital financial knowledge								0.093
Financial decision making								0.190
Financial management challenges	4.212	0.166	2.493	0.193	1.663	2.655	1.889	0.348
Moderating Effect (Digital financial knowledge)								0.055

Table 8 displays the outcome of path analysis, indicating that all the hypotheses were accepted with significant paths. The coefficient value stated is 0.852, which corresponds to reading p <0.001; thereby making it so critical and significantly impacts on trading activity of investors in this sector. However financial decision has proven to bring positive influences that have minimal impacts of smaller nature of trading activities as given out by value of 0.140 with p value less than 0.05.

The mediation effect of 'Financial decision making' is highly significant at 0.053, p < 0.05, while the moderation of 'Digital financial knowledge' is at 0.133, p < 0.01. This indicates that financial decision-making strengthens the link between challenges and trading activities, while digital knowledge enhances investors' ability to face these challenges. Overall, these results support the hypothesis framework and demonstrate the substantial impact of financial and digital skills on trading resilience.

Table 8: Path Analysis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Financial management challenges significantly influence the trading activities of investors.	0.852	0.849	0.025	34.752	0.000
Financial decision making significantly influences the trading activities of investors.	0.140	0.154	0.073	1.907	0.029
Financial decision making significantly mediates the relationship of financial management challenges and the trading activities of investors.	0.053	0.055	0.028	1.914	0.028
Digital financial knowledge significantly moderates the relationship of financial management challenges and the trading activities of investors.	0.133	0.131	0.041	3.267	0.001

5. Discussion

As this financial sector is dynamic in its nature and modern markets very complex, understanding how traders negotiate financial challenges and take decisions that would affect the trading activities of the users is essential. Thus, this study sought to evaluate the inter-relations which exist between financial management challenges, financial decision-making, digital financial knowledge, and trading behaviors. Examination of these factors sought to provide some insight into how financial pressures shape investor behavior and which potential factors, digital literacy, and decision-making capacity represent important mitigants. Overall, acceptance of these hypotheses suggests a complex and structured interplay where constraints from financial sources, improved decision-making, and sharp digital acumen are interconnected to drive trading behaviors. The finding contributes to a deeper understanding of investor responses in financially adverse environments, revealing implications on financial resilience and adaptive trading strategies that can

be deployed to navigate uncertainties in the global markets. Acceptance of the first hypothesis has shown that there is indeed a significant relationship between challenges in financial management and the trading activities, and as such, financial constraints and uncertainties can significantly influence the behavior of investors. It seems in line with earlier studies because it has been established that investors who face higher risks of financial loss are the ones who opt for the most conservative strategies. To further reduce the losses, it has been found that some investors even reduce their frequency of trading. The above study also proves the saying that financial instability encourages aversive behavior in terms of risk, which forces such investors to be more careful in their investment or expose themselves less in a shaky market. Financial management issues, namely liquidity restrictions and macroeconomic volatility, pose a massive barrier to active trading in that they increase perceived risk as well as impact investor confidence. Therefore, these results complement current empirical research since it now establishes that financial difficulties really do play a critical role in shaping investor trading behaviors, and it validates the very concept of financial distress propelling defensive trading behaviors towards protecting capital against the detrimental influence of external economic factors.

Similar results in the verification of the second hypothesis show that financial decision-making significantly influences trading activities because prudent financial decisions have a positive relationship with trading engagement. This research concurs with previous research works, which frequently find a conclusion that well-informed financial decisions are positively associated with higher trading volumes and better diversified portfolios. This study lends empirical support to the argument that the ability to make sound decisions enables investors to maximize returns through proactive engagement in the market by supporting the direct link between financial decision-making and trading activities. Investors with strong decision-making competencies are likely to handle financial challenges aptly and use informed strategies to engage in trading activities that can help mitigate risk while optimizing growth potential. This result gives credibility to the rational choice theory because people seem to make choices that bring maximum return on their investments; hence, when confident with their decisions, people participate actively in trading. Thus, the ultimate result shows that this outcome endorses the significant influence that the acumen in making a decision can have in investment trading decisions and the efficiency of this decision-making on trading activities even if these are surrounded by uncertain outcomes in the market.

This interplay between challenges to financial management and the making of decisions further hints at the fact that even though financial constraints may not appeal to investors, proper skills in financial decision making would make investors strong and more effective in handling the challenge. Acceptance of both hypotheses underlines the resilience that can be built by investors through decision-making capabilities in support of the notion that financial literacy and analytical skills can act as protective factors against the negative impacts of financial instability. The investment community encourages the implementation of decision-making training and financial literacy programs because these enhance the ability to trade despite the difficulties involved in financial management. This study enriches the literature on financial management by focusing on the fact that the roles of both constraints and capabilities are parts of the configuration that shapes investor behavior.

Although financial management challenges risk perception, the decision skills may overcome this effect to make trading activities more robust. This insight has practical utility for investors, financial advisors, and educators in the financial sector.

Therefore, the third hypothesis regarding mediating roles by financial decision-making as the connection between issues within financial management and trading reflects a critical role insofar as connecting problems of financial management and activities of trading are concerned. The theory is, indeed supported, more so in that it hints that such processes of decision-making tend to relieve constraints in financial management that might render investor behavior very inactive even under hard external challenges. In a way, through the mediation of the financial management challenges, financial decision-making provides an avenue through which the risk could be assessed and rectified, thus maximizing the effectiveness of the response to such constraints and continuing market involvement. This mediation effect presents a form of resilience in that sound financial decision-making can buffer against the damaging impact of financial challenges; it is evidence that soundly structured decision-making can serve as a buffer that will mitigate adverse effects on well-being. These results do extend prior empirical research by saying that financial decision-making activities directly influence trading activities but will also be an adaptive mechanism for investors facing financial instability. Consequently, this realization underlines the importance of decision-making as a key competency for investors, because it will enable them to navigate the challenges of managing finances with agility.

The fourth hypothesis, which deals with the moderating effect of digital financial knowledge, also garnered empirical support, indicating that digital literacy significantly strengthens the relationship between financial management challenges and trading activities. This finding is in line with prior studies that have underscored the importance of digital knowledge in contemporary investment practices, showing that investors with high digital literacy are better placed to analyze and respond to financial challenges in real-time. Digital financial knowledge expands investors' access to market data, analytics, and forecasting tools; therefore, the investor has a better understanding of which decisions to make even during financial management problems. Thus, digital literacy reduces perceived risks from financial instability in trading as the investor engages confidently. This result confirms the theory of planned behavior by suggesting that knowledge and skills have major impacts on people's reactions to stressful experiences, so that online financial literacy enables investors to address financial conditions and be proactively engaged in the marketplace.

Collectively, all these hypotheses being accepted gives profound insights into the working mechanisms used by decision-makers and knowledge of digital finance, which determine investor resistance to challenges in financial management. While financial decision-making plays as an internal moderating factor, digital financial knowledge works as an external moderator by strengthening the ability of investors to cope with constraints and change in market conditions. The results support the complementarity between decision-making capabilities and digital competencies to build investor resilience, as the investors with both are likely to maintain consistent trading behavior even in adverse financial environments. This study contributes to the behavioral finance literature, providing empirical evidence for the interplay of

cognitive and technological factors in shaping investor reaction to financial shocks and carrying larger implications that are more practical to apply in designing investor education programs with both financial decision-making competencies and digital literacy as priorities. With these competencies combined, investors would find a firm base for responding to financial shocks to support more active trading activities and more prolonged engagements in the markets.

In conclusion, this paper explores in detail how together financial management challenges, decision-making on finance, and digital financial knowledge affect investors' trading activities. It shows that the acceptance of all four hypotheses emphasizes significantly how financial constraints influence investors' behavior, how good decisions empower them, and also the crucial moderating effects of digital literacy on their resilience in trading. It could contribute to knowledge with regard to investor behavior in complex financial environments, where building both decision-making acumen and digital competencies supports adaptive trading strategies. This research then forms valuable contributions to the behavioral finance literature, proposing practical approaches for investors and financial advisors on strengthening trading engagement amidst financial challenges and changing market conditions.

6. Conclusion

In conclusion, this research brings out the significant roles financial management challenges and financial decision-making play in influencing investors' trading activities. The study, by incorporating digital financial knowledge as a moderating factor, gives a comprehensive framework that recognizes the dynamic interactions among financial challenges, decision-making, and digital competencies. The findings thus indicate that despite financial hardships being an inhibiting factor to efficient trading, both financial decision-making and digital knowledge are instruments that will help investors get over such difficulties, hence the role of financial literacy and digital acumen in investment practices cannot be neglected. This integrated approach would contribute to our understanding of how investors manage risks and adapt their strategies, with a model applicable to various investor profiles and adaptable to different financial conditions. Furthermore, this study offers essential insights for practitioners in that better digital literacy and decision-making are the important components for strengthening resilience against financial uncertainty. The findings inspire a move towards holistic financial education which embeds digital competencies. This empowers the informed and resilient investor base more than ever. Research of this nature underlines the urgency of preparing investors in adapting to economic challenges brought by technological advancements. A well-established foundation is then presented for future studies in a complex interplay between finance, technology, and decision-making.

7. Implications of the study

It advances theoretical contributions in financial management, investment behavior, and digital knowledge integration since it explores the challenges associated with financial management decisions as well as the effects brought about by them on investors' trading activities, complemented by mediation and

moderation effects. This study provides a more elaborate understanding over and above what has hitherto been theorized on financial management and how investment decisions are made under the influence of digital knowledge moderation of the relationships linking financial management challenges to behaviors in trading. This interaction provides a robust framework for understanding investor resilience in volatile market conditions, responding to calls in the literature to examine complex mechanisms by which financial literacy, decision-making, and management challenges intersect to influence investor behavior. By analyzing these dynamics, the study reinforces the theoretical value of knowledge-based and behavioral finance perspectives, illustrating how digital literacy acts as a safeguard that empowers investors against adverse financial impacts. This research enriches the mediating role of financial decision-making, pointing to how effective decision-making damps the negative impacts of financial challenges on trading. This multi-dimensional analysis therefore strengthens the theoretical basis for further research, urging scholars to examine digital competencies as critical assets in the new landscape of investor behavior and financial decision-making theories.

Emphasizing from the findings of this study, this research should mean both investment and financial house organizations would have to recognize the acquisition of digital knowledge in finances and the incorporation of effective financial decision practices. A strengthened digital finance knowledge helps investors, who are always facing challenges while managing finances, in better trading, which acts as a useful tool against any economic uncertainties. The results can therefore be used by financial institutions and advisory firms to implement tailor-made programs and tools that enhance the ability of clients to make sound financial decisions in adverse economic conditions. Finally, digital competencies should be part of investor education since it highly moderates the impact of financial hardship on investment decisions. Policymakers will benefit from such findings as they back digital financial literacy programs as a more digitally literate investment base is likely to sustain financial stability, even in times of market fluctuation. In this sense, the current study points out the crucial role for integrating financial knowledge with digital literacy: both private and public sectors should embrace holistic financial education frameworks.

8. Limitations and Future Research Directions

This study is also not without its limitations that will present promising avenues for further research. First, this research relied on a sample demographic that may not really capture the full scope of investor experiences, mainly about regional and socioeconomic differences. Future studies could then open up the participant pool into different cultural and economic settings to see if what is observed holds universally. Moreover, although this study used quantitative analysis to determine the relationships between the variables, qualitative research can further elaborate on the lived experiences and subjective perspectives of investors in developing greater insight into how financial challenges shape decision-making. Another limitation in this study is that only digital financial knowledge was examined as the primary moderating variable, whereas other kinds of digital competencies-possibly data analysis or knowledge about cybersecurity-might similarly affect trading

behaviors and would require further research.

For further longitudinal data, how exactly changes in financial management, trading, and economic environment will change over time-its effects on or modification as one goes along-beside economic changes and advances in technology-would allow such studies to move deeper to understanding how emerging technology can continue mediating or moderate a more precise relationship of finance and trading activities between itself. Other possible moderators such as risk tolerance or psychological resilience may also be critical in an understanding of the dynamics of investor behavior. An extension of the existing model of research in this regard may bring about a greater depth both theoretically and practically in terms of application, thus helping investors and educators cope with the complexities involved in the current financial markets better.

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