



The Effect of Positive Psychological Capital on Improving the Financial Performance of Small and Medium Businesses with the Moderating Role of Managers Financial Literacy

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ABSTRACT

In today's rapidly changing economic environment, improving the financial performance of small and medium-sized enterprises (SMEs) is essential, given their critical role in economic growth. Positive psychological capital has been identified as an internal resource with strong potential to enhance organizational outcomes. Yet, the processes through which it affects financial performance and the influence of managers' financial literacy remain unclear. This study examines whether financial literacy moderates the relationship between positive psychological capital and SME financial performance. The research employed an applied, descriptive-survey design with correlational analysis. The population consisted of SME managers in the northern provinces of Iran: Gilan, Mazandaran, and Golestan. Using Cochran's formula and stratified random sampling, 384 managers were selected, with 277 valid responses collected from October 2023 to March 2024 (72% response rate). Data were gathered using three instruments: Luthans et al.'s (2007) standardized positive psychological capital questionnaire, and two researcher-developed tools assessing financial literacy and financial performance. Structural equation modeling was conducted using SmartPLS version 3. Findings revealed a positive and significant relationship between psychological capital and financial performance ($\beta = 0.15$, $p = 0.01$). Each dimension—self-efficacy, hope, resilience, and optimism showed significant direct effects. Financial literacy strengthened this relationship ($\beta = 0.07$, $p = 0.03$), with only the financial behavior dimension acting as a significant moderator ($\beta = 0.14$, $p < 0.01$), while other dimensions (attitude, investment knowledge, market literacy, and regulatory awareness) were not significant. These results suggest that psychological capital is a robust predictor of SME financial performance. Moreover, financial literacy, particularly responsible behaviors such as budgeting, planning, and cash flow management, provides a vital context for converting psychological strengths into tangible financial results. The study underscores the need for integrated training programs to simultaneously enhance managers' psychological capital and practical financial skills

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1. Introduction

In the current economic environment, characterized by complexity and fluctuations in financial markets, both organizations and individuals are compelled to identify resources that enhance financial performance while ensuring its long-term sustainability. Within this context, positive psychological capital a multidimensional construct in positive psychology—has attracted considerable attention from scholars in management, behavioral economics, and finance (Centinaio et al., 2024). This form of capital comprises four key elements: self-efficacy (belief in one’s abilities), optimism (expectation of favorable outcomes), resilience (capacity to adapt to challenges), and hope (goal setting and pursuing alternative strategies). As an internal resource, positive psychological capital strengthens individuals’ capacity to overcome financial challenges and achieve economic objectives (Vukovic et al., 2025). Research indicates that it influences not only individual productivity but also broader financial indicators such as organizational profitability, investment returns, and reduction of irrational risk-taking (Valcanover et al., 2024). Despite these insights, the mechanisms linking positive psychological capital to financial outcomes remain insufficiently understood and are likely affected by mediating and moderating factors, including financial literacy, human capital, and social capital (Chava et al., 2025). Financial literacy the ability to understand essential financial concepts like budgeting, investing, and debt management, and apply this knowledge in decision-making is critical for translating psychological resources into financial results (Ilan & Mugerma, 2025). For instance, high optimism alone may not prevent individuals from engaging in risky investments without adequate financial knowledge. Recent studies suggest that financial literacy, as both a technical and cognitive-emotional competence, moderates the effect of psychological capital on financial performance (Pitthan & De Witte, 2024). Although prior research has established a bidirectional link between positive psychological capital and financial outcomes (Sajid et al., 2011), key gaps remain: the moderating role of financial literacy has rarely been explored, and

the influence of cultural and contextual differences on this relationship remains unclear. This study addresses these gaps by testing a moderated model, focusing on whether managers' financial literacy affects the impact of psychological capital on SME performance and identifying which component self-efficacy, optimism, resilience, or hope most strongly drives financial outcomes. Theoretical foundations, research background, conceptual framework, methodology, results, discussion, and practical implications are subsequently presented.

2. Literature Review

Small and medium-sized enterprises (SMEs) serve as essential drivers of economic growth, contributing significantly to reducing unemployment and promoting market stability. By influencing competition over the long term, these firms help regulate profit margins and pricing, ultimately supporting competitive equilibrium. Research indicates that SMEs are critical for sustainable economic development, as they attract labor and enhance market flexibility (Ortiz-Martinez et al., 2023). Additionally, modern economies depend on SMEs to accelerate specialization by producing competitive goods and services. Despite their importance, high failure rates among young enterprises, particularly within the first five years, pose serious social and economic challenges. This underscores the necessity of investigating the factors that influence SME survival and overall performance (Triana et al., 2024). Given that many SMEs are owner-managed, the decisions and behaviors of managers have a direct impact on business outcomes. Evidence highlights that success is closely linked to robust communication networks that provide access to information and opportunities, the capacity to attract both financial and human resources, and managerial competencies in production, marketing, and innovation (Pangeiko et al., 2025).

2-1. Positive Psychological Capital

Psychological capital, like human and social capital, is an intangible

organizational asset that can be cultivated and managed at relatively low cost while generating meaningful outcomes (Gu et al., 2024). It encompasses positive psychological capacities that are measurable, developable, and manageable, making them suitable for systematic interventions (Avey & Holley, 2024). Literature generally identifies four main components: self-efficacy, hope, optimism, and resilience, which together assess an individual's capacity to face challenges and achieve objectives. Self-efficacy reflects confidence in one's ability to plan, execute, and successfully complete tasks, playing a key role in both personal and organizational performance (Van Zyl et al., 2023). Hope denotes the ability to devise pathways toward goals and the motivation to follow them (Ellis et al., 2024). Optimism involves attributing negative events to external, temporary, and specific causes, whereas pessimism attributes them to internal, stable, and global factors. Resilience is the capacity to endure and adapt to stress, uncertainty, and adversity (Stroh & Dayneko, 2023). Within the positive organizational behavior framework, positive psychological capital is viewed as a composite construct that provides competitive advantage. It enhances human capital (knowledge and skills) and social capital (relationships among members), forming a measurable and manageable resource whose outcomes influence organizational performance (Llorente-Alonso et al., 2023). Demonstrating psychological capital through hope, optimism, resilience, and confidence—serves as a cost-free signal of capability and reliability, influencing stakeholders' perceptions and evaluations (Luthans & Peterson, 2024; Zandazar et al., 2024). Individuals oriented toward competence and optimism are often perceived as trustworthy leaders, and empirical evidence across multiple fields confirms that these qualities foster positive expectations among audiences (Kraus et al., 2023). Meta-analyses and longitudinal studies show that psychological capital significantly predicts job performance, contributing more to outcomes than demographic or personality factors (Kumar Tiwari et al., 2025; Guo et al., 2025). Its dynamic and trainable nature makes it difficult to imitate, thereby creating sustainable competitive advantages (Ni & Gao, 2025; Mujiatun et al.,

2025). Additionally, it facilitates synergy between human and social capital, supporting entrepreneurship, creativity, and innovative performance, particularly under challenging conditions.

2-2. Financial Literacy of Managers

Financial literacy is widely recognized as a critical managerial competency that significantly affects entrepreneurial performance and growth. Researchers agree that entrepreneurs, irrespective of age, are consistently engaged in decision-making concerning the sourcing, allocation, and utilization of resources, all of which carry important financial consequences. Effective entrepreneurship therefore requires adequate financial literacy (Afsar Basha et al., 2023). Entrepreneurs with strong financial literacy can utilize financial resources more efficiently, leveraging financial services to improve business outcomes (Aman et al., 2024). Low literacy levels may limit the ability to evaluate complex financing options and hinder optimal decision-making, whereas higher literacy enables informed choices, supporting long-term financial stability and reducing economic risk. Financial literacy training enhances not only knowledge of financial management but also critical skills such as analytical thinking, opportunity recognition, and self-confidence, which are particularly vital for SMEs facing resource constraints (Sajid et al., 2024). Financial decisions rank among the most consequential choices in life, and cognitive limitations combined with insufficient financial knowledge often result in deviations from sound financial principles, a phenomenon well-explained by cognitive science (Ha et al., 2024). Traditional economic models fail to fully capture irrational human behavior, which significantly influences financial systems. Behavioral finance addresses this gap by observing actual decision-making patterns, revealing heterogeneity in financial behavior that classical economics cannot explain (Zhang & Ping, 2025). Individual differences in psychological capital and cognitive abilities play a central role in financial behavior, as many people lack the psychological resources to address complex financial problems or act impulsively without guidance

(Aristei et al., 2024; Grana-Alvarez et al., 2024). Financial literacy is a key factor linking psychological capital to financial performance. Beyond knowledge and skills, effective financial behavior also requires motivation, particularly self-efficacy, which shapes the ability to pursue financial goals. Consequently, financial literacy influences financial outcomes both directly and indirectly by enhancing psychological capabilities and decision-making confidence (Struckell et al., 2022; Gerrans et al., 2024).

2-3. Small and Medium-sized Businesses

Small and medium-sized enterprises (SMEs) exhibit many common characteristics globally; however, a single universal definition is not feasible. Each country determines the criteria for SMEs according to its economic, social, and institutional context, often relying on quantitative measures such as workforce size and annual turnover (Panahinezhad, 2023). In Iran, the Ministry of Industries and Mines and the Ministry of Agricultural Jihad (1401) define SMEs as industrial and service units both urban and rural with fewer than 50 employees. The Ministry of Cooperatives aligns with these definitions depending on the type of activity (Manouchehri, 2024). The Statistical Center of Iran categorizes businesses into four groups: 1–9, 10–49, 50–99, and more than 100 employees (Bazarganzadeh, 2024). While similar to European Union classifications, only businesses with fewer than 10 employees are considered small workshops, whereas larger firms are labeled “industrial factories” (Khalili, 2024). SMEs often demonstrate greater adaptability than large corporations, responding more swiftly to market changes and evolving customer demands due to their flexible organizational structures (Analoiei, 2024). They also adopt new technologies more rapidly and contribute to a more equitable income distribution, reinforcing their strategic importance. Accordingly, both developed and developing nations prioritize policies and planning for SMEs, recognizing their role in fostering innovation, entrepreneurship, and export capacity (Masoumi, 2024). High failure rates among newly established businesses generate significant economic and social

consequences, emphasizing the need to examine the factors that influence SME performance. Understanding these determinants is essential for enhancing financial outcomes, supporting business sustainability, and promoting long-term organizational success.

2-4. Research Background

Multiple studies have investigated the influence of intangible forms of capital including psychological, social, and human capital on organizational performance. However, there is a noticeable gap: no research has specifically examined the effect of positive psychological capital on the financial performance of small and medium-sized enterprises (SMEs), considering the moderating role of managers' financial literacy. This represents the primary innovative contribution of the present study. Previous research relevant to this topic includes the following findings: Giriskan (2026) emphasized that training programs, mentorship, and organizational support, along with self-regulation and mindfulness practices, effectively enhance psychological capital, supporting entrepreneurs' growth and well-being. Fernandez-Alles et al. (2026) found that academic entrepreneurs' psychological capital varies across internationalization stages, with optimism more prominent in internationalized spin-offs and self-efficacy critical for de-internationalized ventures. Margaca (2026) highlighted that investing in PsyCap comprising hope, self-efficacy, resilience, and optimism—yields benefits unattainable through other types of capital. Ni and Gao (2025) demonstrated that economic and cultural capital positively affect access to higher education, with financial literacy strengthening this effect, particularly for urban households. Jahani et al. (2025) showed that clinical competence strongly correlates with nurses' psychological capital. Mujiatun et al. (2025) reported that Islamic financial literacy and religiosity positively influence entrepreneurial and halal tourism performance. Kumar Tiwari et al. (2025) emphasized the mediating role of organizational psychological capital in firm performance. Hu et al. (2025) found that financial inclusion and investor protection shape crowdfunding

outcomes, while Kibler et al. (2024) highlighted that psychological capital reduces emotional exhaustion among aging entrepreneurs. Other studies underscored the impact of PsyCap on opportunity recognition, decision-making, organizational climate, social networks, and risk reduction (Loi et al., 2024; Salinas Vasquez et al., 2024; Kumar Banerjee et al., 2024). Despite this extensive body of research, an integrated empirical examination of SMEs, combining psychological capital, managers' financial literacy, and financial performance, remains absent. Addressing this gap is essential to understanding how psychological resources and managerial financial skills jointly influence SME success and sustainability

2-5. Research Innovations

- This study is among the first to investigate the direct effect of positive psychological capital on the financial performance of SMEs, focusing specifically on smaller enterprises in a developing economy context.
- The research incorporates managers' financial literacy as a moderating variable, providing new insights into how managerial competencies enhance the translation of psychological capital into measurable financial outcomes.
- The study distinguishes between the components of psychological capital (self-efficacy, hope, optimism, and resilience) and financial literacy (behavior, attitude, investment literacy, market literacy, and regulatory knowledge), offering a detailed, component-level analysis.
- By focusing on SMEs in the northern provinces of Iran, this research adds context-specific empirical evidence that can inform policy, managerial training, and strategic interventions for enhancing SME performance.

3. Research hypotheses

Based on the literature reviewed in the previous sections and the objectives of this research, the hypotheses are formulated as follows:

Main Hypothesis 1:

There is a significant relationship between positive psychological capital and the financial performance of managers of small and medium-sized enterprises (SMEs) in the northern provinces of the country.

Sub-hypotheses for Main Hypothesis 1:

There is a significant relationship between self-efficacy and the financial performance of SME managers in the northern provinces.

There is a significant relationship between hope and the financial performance of SME managers in the northern provinces.

There is a significant relationship between optimism and the financial performance of SME managers in the northern provinces.

There is a significant relationship between resilience and the financial performance of SME managers in the northern provinces.

Main Hypothesis 2:

Financial literacy moderates the relationship between positive psychological capital and financial performance among managers of SMEs in the northern provinces, such that higher financial literacy strengthens this relationship.

Sub-hypotheses for Main Hypothesis 2:

1- Financial behavior moderates the relationship between positive psychological capital and financial performance, with higher financial behavior strengthening the relationship.

2- Financial attitude moderates the relationship between positive psychological capital and financial performance, with higher financial attitude strengthening the relationship.

3- Investment literacy moderates the relationship between positive psychological capital and financial performance, with higher investment literacy strengthening the relationship.

- 4- Financial market literacy moderates the relationship between positive psychological capital and financial performance, with higher financial market literacy strengthening the relationship.
- 5- Knowledge of macroeconomic laws and policies moderates the relationship between positive psychological capital and financial performance, with greater knowledge strengthening the relationship.

Conceptual Model of the Research:

The conceptual model illustrating the relationships among positive psychological capital, its dimensions, financial literacy, and financial performance is presented as follows:

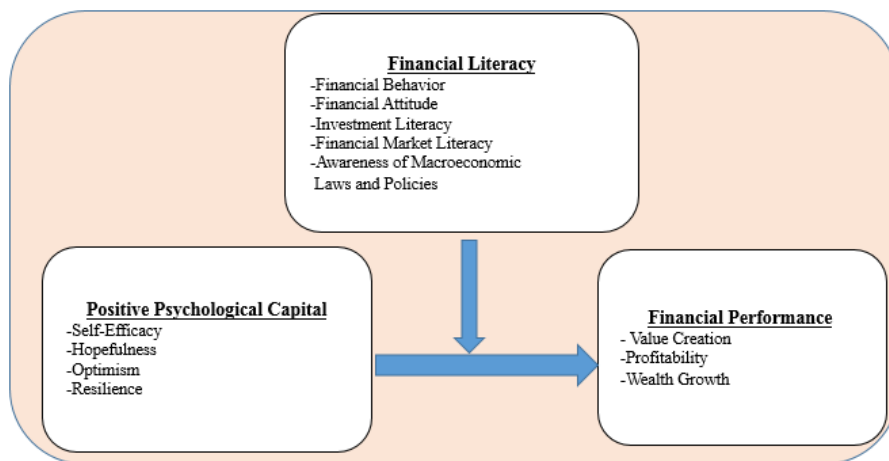


Fig 1. Conceptual research model (Design: Authors)

4. Methodology

Considering that this research seeks to explore the relationship between positive psychological capital and financial performance while examining the moderating effect of financial literacy, and that its findings have practical relevance for the target population, it is classified as applied research in terms

of purpose. The study adopts a descriptive, survey-based, and field-oriented approach, utilizing existing documents and structured questionnaires for data gathering. The questionnaires were distributed among the statistical sample and collected directly from the field. The population consisted of all managers of small and medium-sized enterprises (SMEs) in the northern provinces of Iran. Based on the population size and referencing the Krejci and Morgan table, a sample of 384 managers was initially determined, considering the practically unlimited population. Ultimately, 277 fully completed questionnaires were obtained, yielding a response rate of 72%. Stratified random sampling was employed to ensure representativeness. Data were analyzed using structural equation modeling (SEM) with SmartPLS 3 software. Positive psychological capital was measured using the standardized 26-item questionnaire developed by Luthans (2004), covering four dimensions: self-efficacy (items 1–7), hope (8–14), resilience (15–20), and optimism (21–26). Other variables were assessed via researcher-developed instruments, with content validity confirmed through the fuzzy Delphi method. For financial performance, an initial set of dimensions was extracted from the literature, including cost management, value creation, risk management, profitability, efficiency, revenue management, asset management, and wealth creation. After validation through the fuzzy Delphi method, value creation, profitability, and wealth creation were finalized as the core dimensions, and a 28-item questionnaire was designed accordingly (value creation: 1–12, profitability: 13–19, wealth creation: 20–28). Financial literacy dimensions were initially derived from literature, such as income-saving literacy, money-spending literacy, budgeting, financial market literacy, income generation, investment, borrowing and financing, working capital management, risk hedging, financial knowledge, financial behavior, attitude, skills, and understanding of laws and macroeconomic policies. Following fuzzy Delphi validation, financial market literacy, investment literacy, financial behavior, financial attitude, and knowledge of macroeconomic laws and policies were confirmed. A 36-item instrument was created, covering

financial behavior (1–9), attitude (10–18), investment literacy (19–25), market literacy (26–30), and macroeconomic knowledge (31–36), with all items rated on a five-point Likert scale (1 = very low, 5 = very high). The reliability of the instruments was confirmed using Cronbach’s alpha: 0.81 for financial performance, 0.84 for financial literacy, and 0.83 for positive psychological capital, indicating acceptable internal consistency. The study followed a sequential process: first, research variables and dimensions were identified through extensive literature review and theoretical analysis, leading to the formulation of the conceptual model and hypotheses. Next, appropriate measurement tools were selected and developed, with validity ensured via fuzzy Delphi. Questionnaires were then distributed to SME managers using stratified random sampling, and the collected data were screened and prepared for analysis. Finally, hypotheses were tested using structural equation modeling in SmartPLS 3, with results interpreted and reported accordingly.

5- Findings

5-1- Descriptive statistics

Results related to demographic characteristics are shown in Table 1 and descriptive statistics of research variables are also shown in Table 1.

Table 1. Demographic characteristics of respondents

Index	Type	Abundance	Percentage
Gender	Male	155	56
	Female	122	44
Age	20 to 25 years	4	1
	26 to 30 years	78	28
	31 to 35 years	99	36
	35 years and above	96	35
Education	Diploma	7	2
	Bachelor	207	75
	MA	55	20
	Ph.D.	8	3

Index	Type	Abundance	Percentage
Work Experience	5 years	18	6
	6 to 10 years	113	41
	11 to 15 years	74	27
	More than 15 years	72	26
Total sample		277	100

Source: Research findings

According to the table above, most respondents are male, accounting for approximately 56% of the total sample. The majority are aged between 31 and 35, hold a bachelor's degree, and have 6 to 10 years of work experience.

5-2- Inferential Statistics

In the context of structural equation modeling (SEM), the evaluation of the conceptual model's fit was carried out in three sequential steps. Initially, the factor loadings for all measurement items associated with each variable were examined. Next, the adequacy of the measurement model was assessed, and finally, the structural model's overall fit was analyzed. During the first step, any measurement items with factor loadings below the threshold of 0.4 were slated for removal. In the primary model, all items corresponding to the main research variables demonstrated factor loadings exceeding 0.4, resulting in no eliminations. However, for the sub-model addressing sub-hypotheses 5 through 9, which investigate the moderating influence of the different components of financial literacy on the link between positive psychological capital and financial performance, certain items were excluded. Specifically, Questions 1 and 7, belonging to the financial behavior dimension, along with Question 17 from the financial attitude dimension, were removed from the model to ensure measurement validity and model fit

Table 2. Research variables and components

Variable	Variable	Component	Variable	Component	Qty	Variable	Component	Qty
Positive psychological capital	Self-efficacy	7	Financial performance	Value Creation	12	Financial literacy	Financial Behavior	7
							Financial Attitude	8
	Hopefulness	7		Profitability	7		Investing Financial	7
	Resilience	6					Market Literacy	5
	Optimism	6		Wealth Creation	8		Awareness of Macroeconomic Laws and Policies	6

Source: Research findings

Next, the composite reliability (CR) index was used to assess the reliability of the research models, while the average variance extracted (AVE) index was employed to evaluate the convergent validity of the model. The results of the composite reliability and average variance extracted analyses are presented in Table 2.

Table 3. Composite Reliability and Convergent Validity Values of Research Variables

Variables	CR	AVE
Positive Psychological Capital	0.85	0.56
Financial Performance	0.88	0.69
Financial Literacy	0.93	0.59

Source: Research findings

As shown in Table 3, the composite reliability (CR) values are all greater than 0.6, confirming the reliability of the model. Additionally, the average variance extracted (AVE) for all variables exceeds 0.5, indicating that the convergent validity of the model is also confirmed. In the next step, the discriminant validity of the model was assessed using the Fornell-Larcker criterion, with the results presented below.

Table 4. Matrix for measuring divergent validity

Latent variables	Financial performance	Financial literacy	Positive psychological capital
Financial performance	0.86	-	-
Financial literacy	0.79	0.80	-
Positive psychological capital	0.58	0.62	0.76

Source: Research findings

As presented in Table 4, the square root of the AVE for each construct (located on the main diagonal) exceeds its correlations with other constructs within the model, demonstrating that the measurement models possess adequate discriminant validity. Once the measurement models were verified through reliability assessment, convergent validity, and discriminant validity tests, the structural (internal) model results were subsequently examined. Furthermore, the model's goodness-of-fit was evaluated using R^2 values, the GOF criterion, and the Q^2 predictive relevance test. In addition, the Variance Inflation Factor (VIF) test was employed in structural equation modeling to identify potential multicollinearity among the independent variables. VIF values below 3 indicate no serious multicollinearity, values ranging from 3 to 5 suggest moderate multicollinearity, and values above 5 signal severe multicollinearity, which could compromise the reliability of model estimates. The outcomes of the VIF analysis are summarized in the table below, providing a clear indication of the absence or presence of multicollinearity issues in the proposed model.

Moreover, to assess the fit of the estimated model, the coefficient of determination (R^2), the overall model fit (Goodness-of-Fit, GOF), and the predictive relevance of the model (Q^2) were used. The results of the estimated model fit are presented in the tables 6.

Table 5. VIF Test Results

Variable	Model 1 (Main Hypotheses 1 & 2)	Model 2 (Sub-Hypotheses 1–4: Dimensions of Positive Psychological Capital)	Model 4 (Sub-Hypotheses 5–9: Moderating Role of Financial Literacy Dimensions)
Financial Literacy	*	1.91	*
Positive Psychological Capital	1.00	1.77	2.14
Self-Efficacy	*	1.08	*
Optimism	*	1.58	*
Hope	*	1.53	*
Resilience	*	1.52	*
Financial Market Literacy	*	*	1.71
Investment Literacy	*	*	1.86
Financial Behavior	*	*	1.66
Financial Attitude	*	*	1.86
Awareness of Economic Laws and Policies	*	*	1.71

Source: Research findings

Table 6. R² Values of Endogenous Research Variables

Model	R ²	R ² Adjusted	Q ²
Model 1 (Main Hypotheses 1 and 2)	0.43	0.43	0.28
Model 2 (Sub-Hypotheses 1 to 4 - Positive Psychological Capital)	0.38	0.37	0.24
Model 3 (Sub-Hypotheses 5 to 9 - Moderating Role of Financial Literacy)	0.66	0.63	0.44

Source: Research findings

Based on the results displayed in Table 5, the R² values of the examined research models demonstrate substantial predictive power for the structural model. Among these, the third model exhibits the highest level of predictive capability, with an R² value of 0.66, followed in descending order by the first and second models. Furthermore, the Q² values indicate a relatively strong predictive relevance across all models. It is noteworthy that the third model

outperforms the others in terms of predictive strength, whereas the second model shows the lowest predictive performance among the set.

Table 7. Average Covariance Values and R² of Latent Variables

Model	Model One (Main Hypotheses 1 and 2)		Model Two (Sub-Hypothesis 1 to 4- Positive Psychological Capital Dimensions)		Model Four (Sub-Hypothesis 5 to 9- Moderating Role of Financial Literacy Dimensions)	
	AVE	R2	AVE	R2	AVE	R2
Mean Values	0.690	0.592	0.568	0.342	0.342	0.625
GOF	0.639		0.474		0.682	

Source: Research findings

As shown in Table 7, considering the values of 0.01, 0.25, and 0.36 as indicators of weak, medium, and strong fit for the GOF (Goodness of Fit) index, the results for the different research models indicate a strong overall model fit.

5-3- Testing the Research Hypotheses

The first criterion for assessing the fit of the structural model is the significance of the path coefficients. These coefficients must be significant at least at a 5% or 10% confidence level. In this study, the hypotheses were tested at a 90% confidence level.

Testing the First and Second Main Hypotheses

The results of fitting the first model to examine the first and second main hypotheses are presented in Figures 1 and 2 and Table 8.

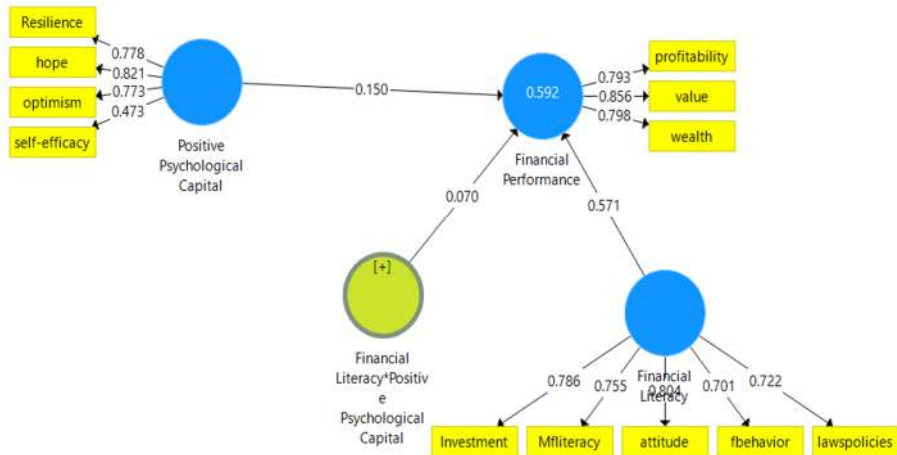


Fig 1. Results of fitting the first model to examine the first and second main hypotheses (path coefficient and R2)
Source: Research findings

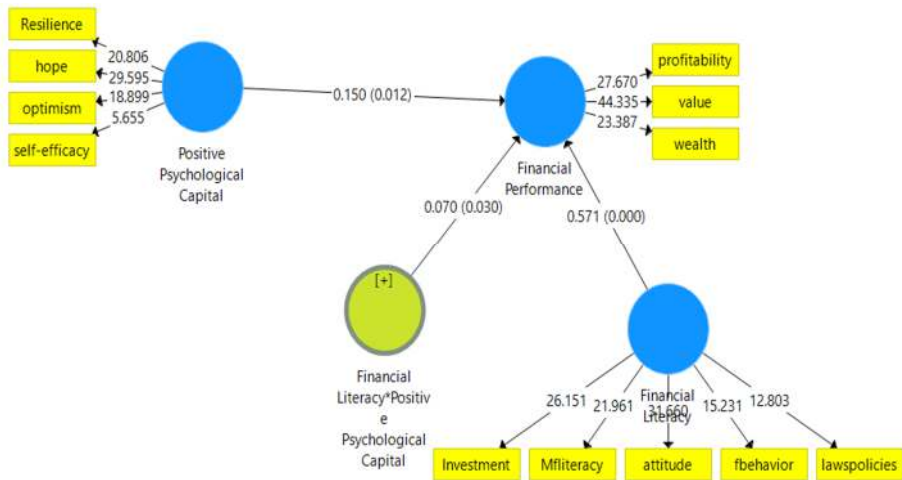


Fig 2. Results of fitting the first model to examine the first and second main hypotheses (path coefficient and significance level)
Source: Research findings

Table 8. Results of fitting the first model to examine the first and second main hypotheses at the 95% confidence level

Path	Path coefficient	t-value	Significance level	Result
Positive Psychological Capital → Financial Performance	0.15	2.33	0.01	Accept
Financial Literacy × Positive Psychological Capital → Financial Performance	0.07	1.93	0.03	Accept

Source: Research findings

As illustrated in Figures 1 and 2, as well as in Table 8, the path coefficient linking positive psychological capital to financial performance is 0.15, which is statistically significant at the 95% confidence level ($t = 2.33$, $p = 0.01 < 0.05$). This finding demonstrates a direct and meaningful relationship, indicating that increases in positive psychological capital are associated with corresponding improvements in financial performance. Consequently, the study's first primary hypothesis is supported.

Concerning the second primary hypothesis, which investigates the moderating effect of financial literacy on the relationship between positive psychological capital and financial performance, the results show a path coefficient of 0.07 for the interaction term. With a t-value of 1.93 and a significance level of 0.03 (< 0.05), this moderating influence is statistically significant, thereby confirming the second main hypothesis of the study.

Sub-hypotheses 1 to 4

The results of the second model, used to test sub-hypotheses 1 to 4, are presented in Figures 3 and 4 and Table 9.

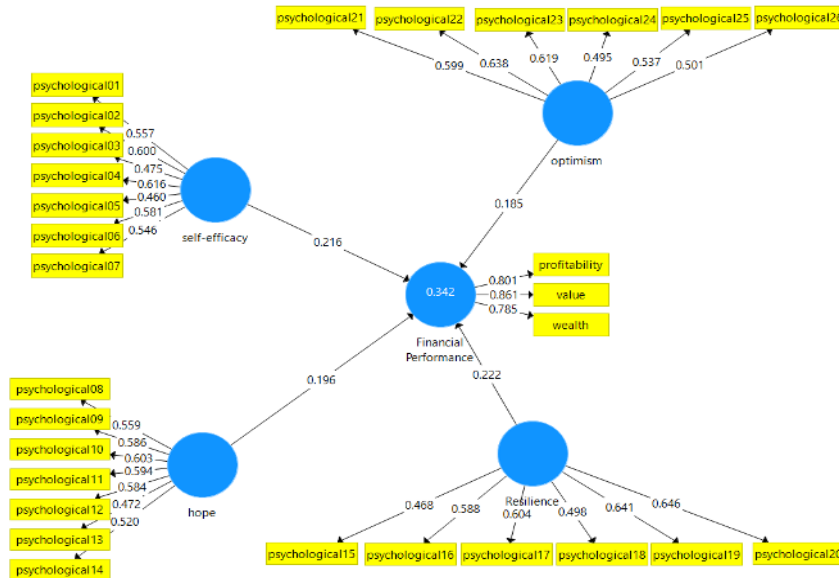


Fig 3. Results of fitting the second model to examine sub-hypotheses 1 to 4 (path coefficient and R^2) Source: Research findings

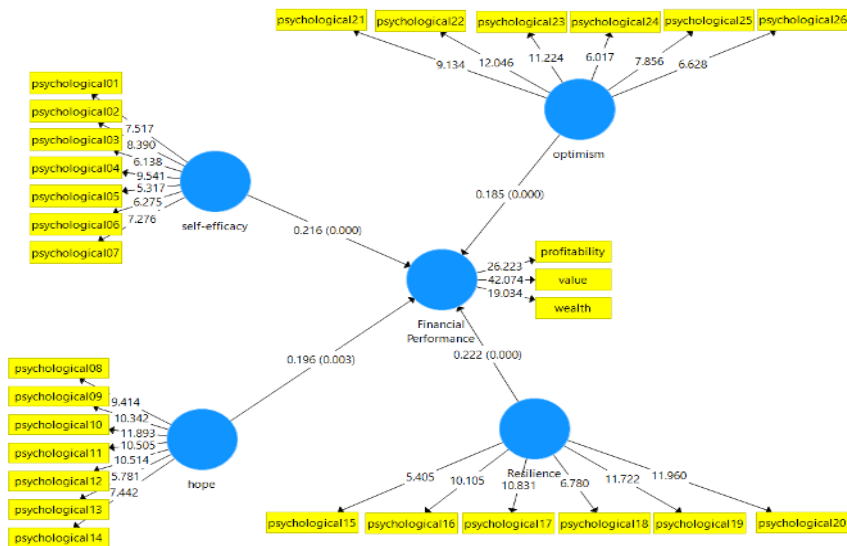


Fig 4. Results of fitting the second model to examine sub-hypotheses 1 to 4 (path coefficient and significance level) Source: Research findings

Table 9. Results of fitting the second model to examine sub-hypotheses 1 to 4 of the study at a confidence level of 90 percent

Path	Path coefficient	t-value	Significance level	Result
Self-efficacy → Financial performance	0.22	3.45	0.00	Accept
Hopefulness → Financial performance	0.20	2.83	0.00	Accept
Optimism → Financial performance	0.20	3.85	0.00	Accept
Resilience → Financial performance	0.22	4.14	0.00	Accept

Source: Research findings

Table 9 presents the findings of the second research model, which investigates the relationship between the individual components of positive psychological capital and financial performance. The path coefficient for the self-efficacy component is 0.22, with a t-statistic of 3.45 and a significance level of 0.00 (< 0.05), indicating a statistically significant relationship at the 95% confidence level. This suggests that higher self-efficacy among managers of small and medium-sized enterprises (SMEs) in the northern provinces is associated with enhanced financial performance, thus supporting the first sub-hypothesis. For the hope component, the path coefficient is 0.20, accompanied by a t-value of 2.83 and a significance level of 0.00 (< 0.05). This confirms a direct and significant relationship, demonstrating that increased levels of hope correspond to better financial performance for SME managers in the region, thereby validating the second sub-hypothesis. Concerning optimism, the path coefficient is 0.20, with a t-statistic of 3.85 and a significance level of 0.00 (< 0.05), indicating a statistically significant relationship at the 95% confidence level. This implies that managers exhibiting higher optimism experience improved financial performance, confirming the third sub-hypothesis. Finally, the resilience component shows a path coefficient of 0.22, with a t-value of 4.14 and a significance level of 0.00 (< 0.05), reflecting a direct and significant effect on financial performance. This indicates that greater resilience among SME managers leads to better financial outcomes, supporting the fourth sub-hypothesis. In summary, the results indicate that all four components of

positive psychological capital—self-efficacy, hope, optimism, and resilience—exert significant positive effects on the financial performance of SME managers in the northern provinces. Each component contributes independently to improved financial outcomes, highlighting the importance of developing psychological resources to enhance managerial effectiveness and organizational success.

Sub-hypotheses 5 to 9

The results of the third model, used to examine sub-hypotheses 5 to 9, are presented in Figures 5 and 6 and Table 10.

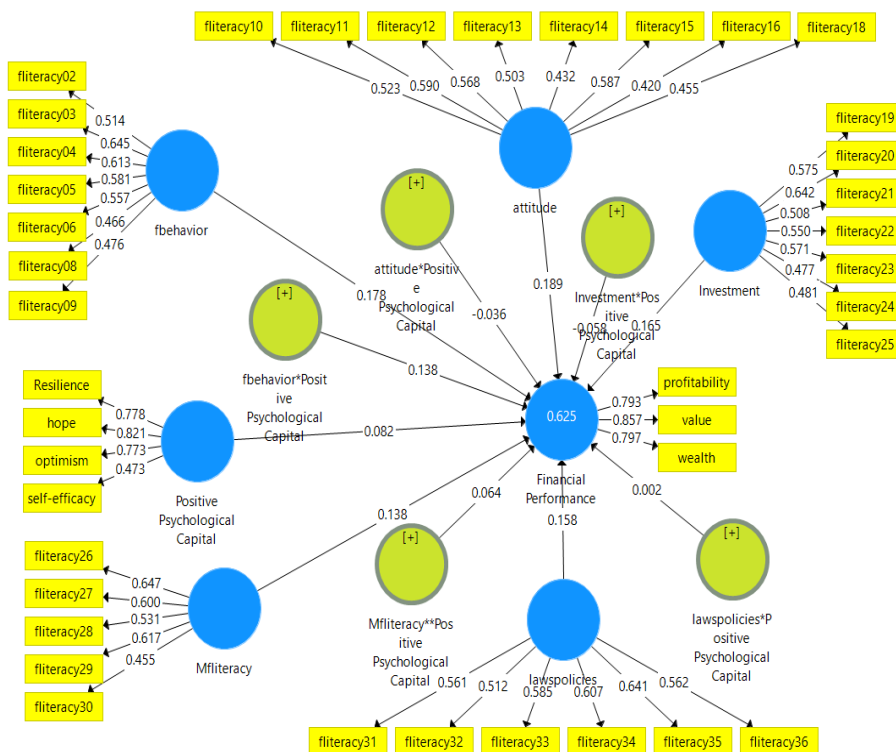


Fig 5. Results of fitting the second model to examine sub-hypotheses 5 to 9 (path coefficient and R²)

Source: Research findings

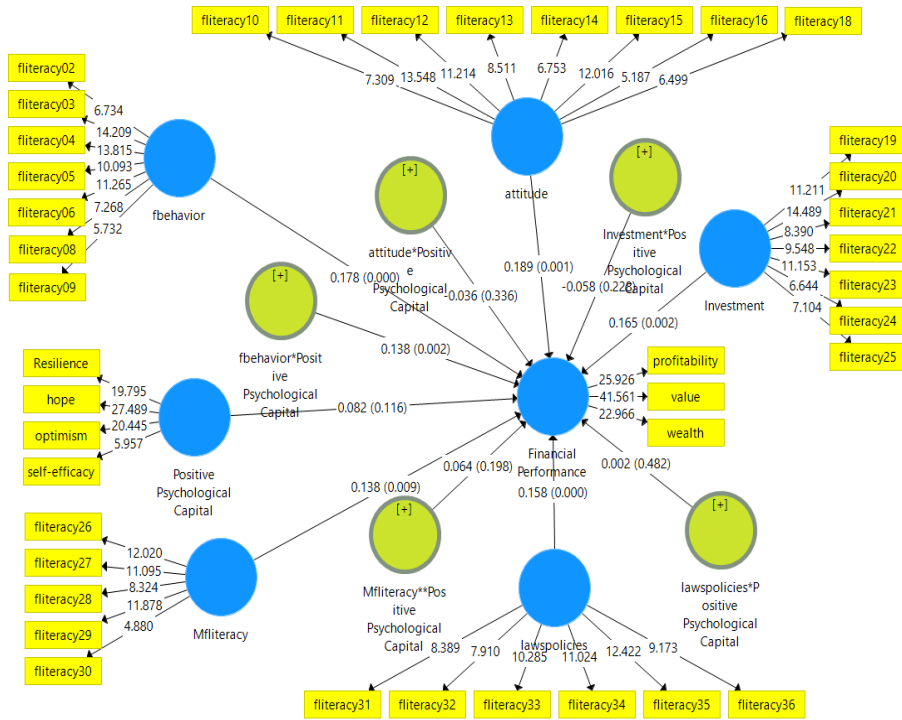


Fig 6. Results of fitting the second model to examine sub-hypotheses 5 to 9 (path coefficient and significance level)

Source: Research findings

Table 10. Results of fitting the third model to examine sub-hypotheses 5 to 9 of the study at a confidence level of 90 percent

Path	Path coefficient	t-value	Significance level	Result
Financial market literacy × positive psychological capital → financial performance	0.06	0.89	0.20	Reject
Investment literacy × positive psychological capital → financial performance	-0.06	0.75	0.23	Reject

Path	Path coefficient	t-value	Significance level	Result
Financial behavior × positive psychological capital → financial performance	0.14	2.96	0.00	Accept
Financial attitude × positive psychological capital → financial performance	-0.04	0.46	0.38	Reject
Awareness of macroeconomic laws and policies × positive psychological capital → financial performance	0.002	0.05	0.48	Reject

Source: Research findings

Table 10 displays the outcomes of the third research model, which tests sub-hypotheses 5 to 9 and examines the moderating influence of financial literacy components on the relationship between positive psychological capital and financial performance. The analysis shows that the path coefficient for the interaction of financial market literacy is 0.06, with a t-value of 0.89 and a significance level of 0.20 (> 0.1), indicating a lack of statistical significance. Accordingly, the fifth sub-hypothesis, which posited a moderating effect for financial market literacy, is not supported. Similarly, the interaction term for investment literacy has a path coefficient of -0.06, with a t-value of 0.75 and $p = 0.23$ (> 0.1), showing no significant moderating effect. Therefore, the sixth sub-hypothesis is rejected. In contrast, financial behavior exhibits a path coefficient of 0.14, with a t-value of 2.96 and a significance level of 0.00 (< 0.05), indicating a statistically significant moderating effect. This finding suggests that stronger financial behavior among SME managers in the northern provinces enhances the positive impact of psychological capital on financial performance. Consequently, the seventh sub-hypothesis is confirmed. For the eighth and ninth sub-hypotheses, the interaction terms for

financial attitude and knowledge of macroeconomic laws and policies are -0.04 and 0.002, respectively. Their t-values (0.46 and 0.05) and significance levels (0.38 and 0.48 > 0.1) reveal that these effects are not significant. Therefore, the eighth and ninth sub-hypotheses, concerning financial attitude and macroeconomic knowledge, are not supported.

In summary, among the various components of financial literacy, only financial behavior demonstrates a significant moderating role in strengthening the relationship between positive psychological capital and financial performance. The other dimension's financial market literacy, investment literacy, financial attitude, and knowledge of macroeconomic laws and policies do not exhibit significant moderating effects in this context.

6- Conclusion and policy Suggestion

The results of this study, investigating the association between positive psychological capital and financial performance in SMEs across the northern provinces of Iran, highlight the significant influence of psychological factors on economic outcomes. Both the main and sub-hypotheses indicate that the components of positive psychological capital self-efficacy, hope, optimism, and resilience have a direct and significant impact on financial performance. Managers and employees endowed with robust psychological resources demonstrate superior decision-making abilities, better problem-solving skills, and greater capacity to identify and leverage financial opportunities, ultimately contributing to enhanced organizational outcomes. Additionally, financial literacy was found to play a moderating role, specifically through the financial behavior component. This suggests that while strong psychological capital is important, the effective translation of these capacities into tangible financial performance relies on proper financial behaviors, including disciplined budgeting, prudent spending, and responsible investment strategies. In essence, financial behavior acts as a conduit that channels psychological resources into measurable financial gains, reinforcing the positive effects of psychological capital on performance. A closer analysis of

the psychological capital dimensions confirms that self-efficacy, hope, optimism, and resilience all exert positive and statistically significant effects on financial performance. Interventions targeting the development of these resources within organizations may thus serve as potent drivers of financial improvement. Managers who cultivate confidence, goal-directed optimism, resilience to setbacks, and hope for future achievements are likely to experience measurable enhancements in financial outcomes. These findings align with prior research indicating the importance of psychological capital for performance. For instance, Ni and Gao (2025) demonstrated that financial literacy enhances the positive influence of economic and cultural capital, while Jahani et al. (2025) found a positive association between psychological capital and clinical competence. Kibler et al. (2024) showed that higher psychological capital mitigates emotional exhaustion in entrepreneurs, and Hoglebe and Lutz (2024) highlighted its role in strategic decision-making in venture capital. Similarly, Giriskan (2026), Margaca (2026), Loi et al. (2024), and Kumar Tiwari et al. (2025) emphasized its contribution to opportunity recognition, entrepreneurial success, and overall organizational performance.

However, the moderating function of financial literacy, particularly the component-specific role of financial behavior, remains relatively underexplored, marking a key contribution of this research. Other dimensions of financial literacy financial market literacy, investment literacy, financial attitude, and knowledge of macroeconomic laws did not significantly moderate the psychological capital–financial performance relationship, consistent with the observations of Kumar Tiwari et al. (2025) and Kumar Banerjee et al. (2024). This suggests that the influence of financial literacy may depend on specific behavioral or contextual factors. The findings can be reasonably generalized to SMEs in the northern provinces, considering the stratified random sample of 277 managers from Gilan, Mazandaran, and Golestan, representing various industries and organizational sizes. The use of validated measurement instruments, including Luthans' standardized questionnaire for psychological capital and researcher-developed tools for

financial literacy and performance, along with robust SEM analysis, supports the internal validity and reliability of the results. Nevertheless, caution is advised when extending these findings to SMEs in different economic, cultural, or regulatory settings. Future studies could replicate this research in other regions or countries to test the robustness of the findings and explore additional contextual moderators. Overall, the study underscores the necessity of integrating psychological development with financial capability-building in SMEs. While strengthening self-efficacy, hope, optimism, and resilience is crucial, these qualities alone are insufficient for optimal financial outcomes. Without practical financial behaviors effective budgeting, informed spending, disciplined cash flow management, and strategic investment the potential of psychological capital may remain unrealized. Psychological capital provides motivation, confidence, and resilience, but financial behavior translates these internal capacities into measurable financial performance.

A dual-focused strategy promoting both psychological strengths and practical financial behaviors can improve financial outcomes and enhance organizational adaptability and competitiveness. SMEs adopting this approach are better prepared to manage economic volatility, capitalize on market opportunities, and execute strategic initiatives with both confidence and financial prudence. Aligning managers' optimism, hope, and resilience with actionable behaviors ensures that psychological resources generate measurable value rather than remaining abstract. These findings have implications for multiple stakeholders. Managers should foster a culture that promotes both psychological growth and financial discipline. Organizational development practitioners are encouraged to design training programs integrating psychological capital enhancement with practical financial management skills. Policymakers should support SMEs not only by providing capital and market access but also by implementing structured programs that enhance managerial psychological competencies and behavioral financial literacy. Integrating psychological and financial capabilities can enhance long-term organizational resilience. By equipping managers with confidence,

optimism, and resilience alongside practical financial skills, SMEs can perform effectively in both stable and turbulent economic conditions. This dual approach encourages proactive decision-making, strategic foresight, and the alignment of psychological strengths with financial planning and risk management, promoting sustainable financial growth. In conclusion, SMEs that strategically invest in both psychological capital and financial behavior development are better positioned to improve immediate financial performance, cultivate enduring competitive advantages, strengthen adaptability, and build a robust foundation for long-term success. Psychological and financial capabilities are mutually reinforcing, providing a comprehensive framework for managerial effectiveness, organizational performance, and sustainable growth.

According to the results of this study, several practical suggestions are also provided:

- 1- Organize regular training workshops aimed at strengthening employees' positive psychological capital. Such workshops can improve skills related to self-efficacy, stress management, optimism, and resilience. By enhancing these psychological attributes, managers and employees become better equipped to handle complex financial decisions and organizational challenges.
- 2- Invest in specialized training programs that focus on improving managers' financial behavior. Since financial behavior was the only financial literacy component with a significant moderating effect, targeted training in areas such as cost control, cash flow management, and responsible spending can reinforce the impact of psychological capital on financial outcomes.
- 3- Develop educational programs that enhance financial decision-making, risk assessment, and financial planning skills. Strengthening analytical and risk management skills allows managers to make more informed and less risky financial choices. When combined with strong psychological capital, these abilities significantly contribute to improved financial performance.

- 4- Establish organizational support systems that promote resilience and adaptive capacity. Supportive structures such as crisis management programs, mentoring, and counseling services can help managers and employees better navigate financial and environmental pressures. Enhancing organizational resilience leads to more stable financial performance.
- 5- Incorporate assessments of psychological capital and financial behavior into hiring and human resource development processes. Evaluating these attributes helps organizations identify individuals who possess strong psychological and financial competencies. This enables more precise training interventions and contributes to the development of a capable and financially responsible workforce.

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All authors had contribution in preparing this paper.

Conflicts of interest

The authors declare no conflict of interest

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