

Capital Structure as a Mediating Mechanism Between Managerial Ability and SME Performance: Evidence from Egypt

Yasmine M. Ragab¹, Salwa Mounir El-Kady², Mohamed A. Saleh¹

¹Accounting Assistant Professor, Accounting & Finance Department, Faculty of Management and Business Intelligence, MTI University, Cairo, Egypt

² Management Assistant Professor, Business & Marketing Department, Faculty of Management and Business Intelligence, MTI University, Cairo, Egypt

Mohamed.amsaleh@gmail.com

Received: 2025-11-05

Accepted: 2025-11-25

Available online: 2025-11-25

ABSTRACT

Purpose- This study examines how capital structure mediates the relationship between managerial ability (MA) and the performance of Egyptian SMEs.

Design/methodology/approach- Using 198 firm-year observations from 22 SMEs listed on the Nile Stock Exchange (2014-2022), managerial ability is measured via Data Envelopment Analysis (DEA) following Demerjian et al. (2012). Capital structure (CS) is proxied by the book leverage ratio. A three-step regression and bootstrapped mediation approach assess the mediating effect of capital structure between MA and SME performance (ROA).

Findings- Results show that MA significantly enhances SME performance. MA is negatively associated with leverage, while leverage positively affects performance. Capital structure partially mediates the MA-performance relationship, supporting the Trade-Off and Upper Echelons theories

Practical Implications- SMEs led by highly capable managers achieve better performance through efficient financing decisions. Boards and investors should prioritize managerial competence when hiring or evaluating executives.

Originality/value- This study provides the first empirical evidence from Egypt on how capital structure channels the effect of managerial ability on SME outcomes, integrating multiple theoretical lenses into a unified mediation framework.

KEYWORDS

Management competence, Return on assets, Leverage, Trade-off theory

1. INTRODUCTION

Small and medium-sized enterprises (SMEs) constitute a cornerstone of economic development in both advanced and emerging economies, generating employment, innovation, and regional growth (Duréndez, et al., 2023). In Egypt, SMEs number nearly 1.7 million, employing 5.8 million people, and representing a vital component of private-sector productivity (CAPMAS, 2020). Understanding how these firms achieve and sustain performance is therefore of significant policy and academic interest.

SMEs differ from large corporations in ownership concentration, financing constraints, and information asymmetry (Raharja, et al., 2022). Because decision-making is often centralized in a few individuals, the competence of top managers becomes a decisive determinant of firm outcomes (Diéguez-Soto, et al., 2022). According to the Upper Echelons Theory (Hambrick & Mason, 1984), organizational outcomes reflect the cognitive traits, values, and experiences of senior executives. Hence, differences in managerial ability (MA) can explain heterogeneity in SME performance.

Financial policy is one of the main channels through which managerial characteristics translate into firm results. From the Trade-Off Theory (Kraus & Litzenberger, 1973), managers weigh the tax benefits of debt against the risk of financial distress to determine optimal leverage. The Pecking-Order Theory (Myers & Majluf, 1984) further predicts that profitable firms rely more on internal funds, reducing leverage, whereas less profitable firms depend on debt financing. Finally, Agency Theory

(Jensen & Meckling, 1976; Ebaid, 2009) suggests that leverage can discipline managerial behavior by reducing free-cash-flow inefficiencies, which is especially relevant in owner-managed SMEs.

Despite extensive research on managerial ability and firm performance, limited attention has been given to the mechanisms that connect them. Recent evidence from large firms (Ting, et al., 2021) suggests that capital structure (CS) mediates the ability–performance relationship, yet such dynamics remain unexplored in SME contexts, particularly within emerging economies such as Egypt. Given SMEs’ financing constraints and governance concentration, examining how managerial ability influences performance through capital-structure choices is both theoretically and practically significant. Therefore, this study addresses the following research question:

Does capital structure mediate the relationship between managerial ability and SME performance in Egypt?

To answer this question, the paper integrates multiple theoretical perspectives—Upper Echelons, Agency, Trade-Off, and Pecking-Order Theories—to build a unified mediation model. Using data from 22 Egyptian SMEs (2014–2022), managerial ability is measured via Data Envelopment Analysis (DEA) following Demerjian et al. (2012), while capital structure is proxied by the book-leverage ratio.

This research contributes to the literature in three primary ways:

It provides the first empirical evidence on how managerial ability influences SME performance through capital-structure decisions in Egypt.

It extends Upper Echelons Theory by empirically linking managerial traits to financing behavior. It enriches the corporate-finance literature on SMEs by validating capital structure as a behavioral transmission mechanism between executive competence and financial outcomes.

The remainder of this paper is organized as follows. Section 2 reviews the relevant literature and develops the hypotheses. Section 3 explains the research methodology. Section 4 presents and discusses the empirical findings, and Section 5 concludes with implications, limitations, and directions for future research.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Theoretical Framework

The connection between managerial capability and firm outcomes is multifaceted. Rather than a direct link, the impact of skilled managers is often transmitted through intermediary decisions such as financing or investment strategies, which eventually shape firm performance.

Several theoretical perspectives explain how MA interacts with CS to affect firm outcomes, including the Upper Echelons, Agency, Trade-OFF, and Pecking Order theories. Collectively, they propose that competent managers make informed financial choices that enhance long-term performance.

This study is built primarily on Upper Echelons Theory (Hambrick & Mason, 1984; Cannella & Holcomb, 2005), which argues that managers’ competences and abilities have a great impact organizational outcome., Managerial ability is even considered to be more crucial in shaping financial decision-making and firm performance In the SME context, where ownership and management are often centralized (Hiebl, 2014); (Ting, et al., 2021).

Supporting insights are also derived from Agency Theory, which underscores how capital structure can mitigate agency costs and influence firm profitability (Ebaid, 2009; Ayaz, et al., 2021); (McMahon, 2004). Agency issues may be more severe in SMEs where ownership and control are concentrated, increasing the potential for information asymmetry and inefficient financing decisions (McMahon, 2004); (Ting, et al., 2021).

The Trade-Off Theory draw attention to the trade-off between the potential burden of financial distress and the tax benefits of debt (Myers & Majluf, 1984; Strebulaev, 2007; Li, et al., 2019). According to this viewpoint, businesses with more leverage may enjoy tax benefits from tax advantages, but those with too much debt may perform worse.

However, according to the Pecking-Order Theory businesses favor internal funding. First, followed by debt, and equity only as a last resort (Myers & Majluf, 1984; Strebulaev, 2007; Li, et al., 2019).This suggests that while businesses with limited internal funds are forced to use more leverage, highly profitable businesses with robust internal resources are less reliant

on debt, whereas firms Within the SME context, this financing pattern may result in a negative association between leverage and performance, largely due to elevated borrowing costs and financial risks (Cekrezi, 2013).

The synthesis of these theories provides a robust argument for the mediating role of capital structure. High-ability managers, as described by the Upper Echelons perspective, make better strategic choices, including how to finance the firm. Informed by Trade-Off Theory, these managers can effectively weigh the advantages and disadvantages of debt to pursue an optimal CS that enhances firm value. Alternatively, adhering to Pecking Order Theory, these managers may prioritize internal financing, leading to lower leverage, especially in capital-intensive or high-tech industries where debt is costly. Finally, through the lens of Agency Theory, these capable managers can also use debt strategically to improve corporate governance and mitigate agency costs, thereby enhancing firm value and performance. These theoretical underpinnings suggest that CS is not simply an outcome of managerial decisions but an active channel via which MA influences company performance.

2.2. Managerial Ability and Firm Performance

Since Hambrick & Mason's seminal work in 1984 and the development of the upper-echelons model, several investigations have provided evidence that managers' attributes affect firm performance (Xu, et al., 2022). This is because managers with varying competencies possess distinct anticipations for the future (Trueman, 1986; Bertrand & Schoar, 2003; Dalwai, et al., 2023). There is a strong correlation between management style and managers' fixed effects on performance. Managers with larger fixed effects on performance not only receive higher compensation, but they also tend to be more prevalent in firms with superior governance (Bertrand & Schoar, 2003). Replacing CEOs with more capable ones leads to improvements in future company performance, while replacing them with less capable ones results in declines (Demerjian, et al., 2012). Managerial competence enhances organizations' performance by providing advanced knowledge, skills, and information to maximize benefits and mitigate costs associated with risk-taking behavior (Simamora, 2021). Xu et al. (2022) argue that MA mediates a negative relationship between age diversity and company performance. Hence, the first hypothesis is stated as:

H1: Managerial ability has a positive and significant effect on SME performance.

2.3. Managerial Ability and Capital Structure

The competence of managers can have an influence on the CS, which in turn affects the market value of the organization (Ting, et al., 2021). Higher-skilled managers lower the risk premium that investors require for information-sensitive debt, as well as having a significant impact on corporate finance policies (Petkevich & Prevost, 2018). In the same context, Yung and Chen (2018) concluded that managers with more managerial skills tend to decrease the utilization of debt in the structure of capital. Top managers' experiences are positively associated with book value measures of capital structure. As the experience of senior managers (CEOs) increases, both the total debt and long-term debt ratios in the company's books also increase (Matemilola, et al., 2018). In addition, Dalwai et. al. (2023) revealed that managerial skills decrease the borrowing cost. Thus, we hypothesize:

H2: Managerial ability is negatively associated with capital structure in Egyptian SMEs.

2.4. Capital Structure and Firm Performance

The decisions made in determining a company's capital structure have a direct impact on both earnings per share and the overall wealth of its shareholders. Hence, it is crucial to exercise caution when making capital structure decisions, as the consequences, both positive and negative, have a profound impact on the future of the firm (Ting, et al., 2021). Previous research has shown a direct correlation between profitability and capital structure, indicating that companies with high profitability tend to have a greater level of debt (Roden & Lewellen, 1995; Champion, 1999; Ghosh, et al., 2000; Hadlock & James, 2002). In the Asian context, Pathak (2011) and Le and Phan (2017) observed a substantial negative correlation between the degree of debt and company performance. One possible explanation for this contradictory finding as per Salim and Yadav (2012) is the comparatively higher cost of borrowing in developing countries, such as India, as opposed to western countries.

H3: Capital structure has a positive effect on SME performance up to an optimal leverage level.

2.5. Mediating Role of Capital Structure

While managerial ability influences firm performance directly, it may also operate indirectly through financial policy. High-ability managers select optimal financing strategies that balance risk and return, affecting firm outcomes via leverage decisions (Ting et al., 2021). Following the mediation logic of Baron and Kenny (1986) and MacKinnon et al. (2004):

1. MA must significantly predict FP (path c).
2. MA must significantly predict CS (path a).
3. CS must significantly predict FP (path b).
4. The coefficient of MA on FP (path c') should decrease after adding CS, indicating mediation.

Thus, we hypothesize:

H4: Capital structure mediates the relationship between managerial ability and SME performance.

2.6. Conceptual Model

Table 1: Conceptual model

Path	Relationship	Expected Sign	Theoretical Basis
H1	MA → FP	+	Upper Echelons Theory
H2	MA → CS	–	Pecking-Order Theory
H3	CS → FP	+	Trade-Off / Agency Theory
H4	MA → CS → FP	Mediation	Integrated Framework

3. METHODOLOGY

3.1. Sample and Data

The study sample comprises 22 small and medium-sized enterprises (SMEs) listed on Egypt's Nile Stock Exchange (NSE) during the period 2014–2022, yielding 198 firm-year observations. Firms with incomplete financial statements or delisting during the study period were excluded. The selected period ensures data availability and captures recent economic conditions influencing SME financing decisions.

All financial and governance data were extracted from official NSE disclosures and firm annual reports. This dataset provides consistent coverage of Egypt's SME sector, where ownership and management structures are typically concentrated.

3.2. Variables

3.2.1. Dependent variable- SME Performance: Firm performance (FP) is proxied by return on assets (ROA), calculated as net income divided by total assets. This accounting-based indicator reflects how efficiently SMEs deploy resources to generate profit and aligns with prior studies (Li, et al., 2019; Ting, et al., 2021).

3.2.2. Independent variable- Managerial ability (MA): Managerial ability measured following Demerjian et al. (2012) model using (DEA). DEA evaluates how efficiently managers convert inputs into outputs, controlling for firm-specific characteristics.

Stage 1- DEA efficiency estimation

$$\text{Max } \theta = \text{Sales} / (v1\text{EMP} + v2\text{COGS} + v3\text{PPE}) \quad (1)$$

Where:

- Employees (EMP)= log of staff count
- COGS= log of cost of goods sold
- PPE= log of property, plant, and equipment

The DEA model satisfies isotonicity (Golany & Roll, 1989), confirmed through correlation testing showing positive relationships between inputs and outputs

Stage 2- Isolating managerial ability

The DEA efficiency scores are regressed on firm-specification factors to extract the residual component (managerial ability):

$$\text{Efficiency} = \beta_0 + \beta_1 \ln \text{TA} + \beta_2 \text{MKTSHR} + \beta_3 \text{FCFD} + \beta_4 \ln \text{AGE} + \beta_5 \text{BSIZE} + \varepsilon \quad (2)$$

Where residuals from this regression represent managerial ability unexplained by firm characteristics.

Table 2 presents the summary statistics and correlation analysis of the dependent and independent variables utilized in Equation (2). Table 3 displays the outcomes derived from Equation (2). The correlation analysis in Table 3 indicates that multicollinearity is not a concern, as confirmed by the variance inflation factor (VIF) values in Table 4. The substantial F-statistic of 3.71 indicates that the model is well-fitted.

Table 2: DEA metrics' descriptive statistics and correlation

		<i>Input 1: Number of Employees</i>	<i>Input 2: Cost of Goods Sold</i>	<i>Input 3: PPE</i>	<i>Output: Sales Revenues</i>
<i>Summary statistics</i>	<i>Mean</i>	3.528	15.696	15.236	16.064
	<i>Std. dev.</i>	1.174	2.272	1.859	2.109
	<i>Min</i>	1.099	0	10.875	0
	<i>Max</i>	5.669	19.988	19.278	20.119
<i>Correlation analysis</i>	<i>Input 1</i>	1	0.5451**	0.5327**	0.5291**
	<i>Input 2</i>		1	0.3120**	0.9501**
	<i>Input 3</i>			1	0.6888*
	<i>Output</i>				1

*, ** significance level of 5% and 1% respectively

Table 3: Equation (2) correlation analysis and statistical summary

		<i>TE</i>	<i>InTA</i>	<i>MKTSHR</i>	<i>FCFD</i>	<i>InAGE</i>	<i>BSIZE</i>
<i>Summary statistics</i>	<i>Mean</i>	0.996	17.378	0.0289	0.9646	2.5143	5.5
	<i>Std. dev.</i>	0	1.427	0.2814	0.1851	0.5475	1.6972
	<i>Min</i>	0.995	15.078	0	0	0	3
	<i>Max</i>	0.996	21.689	3.95	1	3.4657	13
<i>Correlation analysis</i>	<i>TE</i>	1	0.1882**	0.0414	0.2228**	0.0403	0.0451
	<i>InTA</i>		1	0.2590**	-0.0252	0.3513	0.1398*
	<i>MKTSHR</i>			1	0.0197	0.082	0.0529
	<i>FCFD</i>				1	-0.2152**	-0.0888
	<i>InAGE</i>					1	-0.1913**
	<i>BSIZE</i>						1

*, ** significance levels of 5% and 1% respectively

Table 4: Analysis of regression for Equation (2)

	Coeff.	t-value	VIF
<i>Constant</i>	0.995**	4.9	
<i>InTA</i>	2.48*	2.57	1.28
<i>MKTSHIR</i>	-9.16	-0.21	1.26
<i>FCFD</i>	0.0004**	3.33	1.12
<i>InAGE</i>	-3.70	-0.14	1.07
<i>BSIZE</i>	2.32	0.43	1.01
<i>Year fixed effects</i>	Yes		
<i>R²</i>	19.08%		
<i>F-statistics</i>	3.71**		

Note: *, ** significance level of 5% and 1% respectively

3.2.3. Mediating variable-capital structure (CS): Capital structure is proxied by the Book Leverage Ratio (BLR):

$$BLR = \frac{\text{Total Debt}}{\text{Total Assets}}$$

This ratio captures the proportion of firm assets financed by debt and serves as the mediating construct linking managerial ability to performance (Ting, et al., 2021)

3.2.4. Control variables: To mitigate-variable bias, the following controls are included (Bhutta, et al., 2021; Xu, et al., 2022).

Table 5: Control Variable

Variable	Symbol	Measurement	Expected Sign
Firm Size	SMESIZE	ln(Total Assets)	+
Leverage classification	MedBLR	Dummy = 1 if firm leverage > annual median	±
Board Independence	BIND	Independent directors ÷ total directors	+
Board Ownership	BShares	Board shareholding ÷ total shares	+ / -

3.3. Analytical Framework and Mediating Steps

This study adopts the three-path mediation model (MacKinnon, et al., 2004), where capital structure (BLR) mediates the effect of managerial ability (MA) on SME performance (ROA). The three-path mediation framework illustrated in Figure 1.

Step 1- Direct effect (path c):

$$ROA = \beta_0 + MA_t + \text{Control Variable}_t + \varepsilon$$

Step 2- Effect of MA on mediator (path a):

$$BLR_t = \beta_0 + MA_t + \text{Control Variable}_t + \varepsilon$$

Step 3: Mediator effect on performance (path b)

$$ROA_t = \beta_0 + BLR_t + \text{Control Variable}_t + \varepsilon$$

Step 4: Full model with mediator (path c')

$$ROA_t = \beta_0 + MA_t + BLR_t + \text{Control Variable}_t + \varepsilon$$

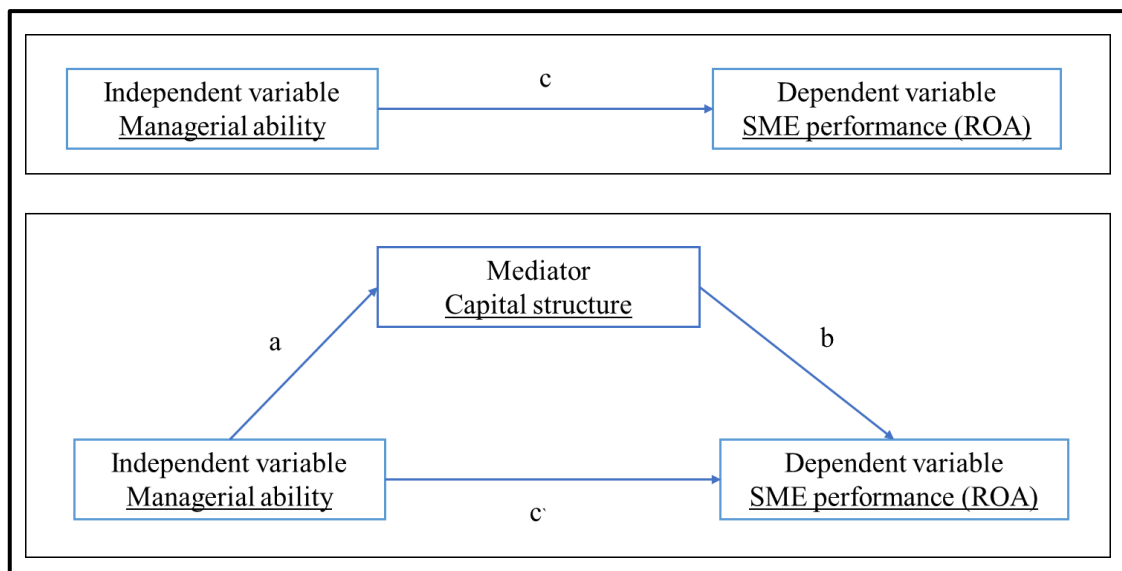


Figure 1: Mediator link between managerial ability and SME performance

3.4. Estimation Technique

Ordinary Least Squares (OLS) regressions are estimated with heteroskedasticity-robust standard errors. For robustness, mediation is verified through Sobel and Monte Carlo bootstrapping tests (MacKinnon et al., 2004), which confirm the indirect effect's significance.

All models are estimated using STATA 17, with multicollinearity checked via the Variance Inflation Factor (VIF < 2) and model fit evaluated by the F-statistic and R² values.

4. EMPIRICAL RESULTS

4.1. Descriptive Statistics and the Mean Differences Test

Table 6 summarizes the descriptive statistics of key variables. The average book leverage ratio (BLR) of 0.445 indicates that, on average, approximately 45% of SME assets are financed by debt, suggesting moderate reliance on external financing. The mean ROA is 0.007, reflecting relatively low profitability consistent with the small-firm context in emerging markets.

The managerial ability (MA) mean of 0.095 with low variance ($SD = 0.004$) suggests homogeneity across SME managerial efficiency. Firms with higher leverage tend to have lower board independence and higher managerial ownership—patterns that align with prior findings in developing economies (Ebaid, 2009; Ayaz et al., 2021).

The mean-difference test confirms that low-leverage firms exhibit higher board independence, whereas high-leverage firms show greater board shareholding, implying governance-driven financing behaviour.

4.2. Correlation Analysis

Table 7 presents the Pearson correlation matrix. Results reveal positive correlations between managerial ability (MA), leverage (BLR), firm size, and performance (ROA), while correlations among independent variables remain below 0.60. The Variance Inflation Factor ($VIF < 2$) further confirms the absence of multicollinearity. These results support the theoretical expectation that competent managers achieve better performance and maintain more effective financing structures.

Table 6: Descriptive statistics and mean differences test

Variable	Summary statistics				Mean differences test		
	Mean	Std. dev.	Min	Max	High BLR	Low BLR	Differences
ROA	0.0072	0.1042	-0.5525	0.4187	0.4187	0.00515	-0.4135**
MA	0.0951	0.0041	0.0382	0.0963	0.0382	0.0954	0.0573**
BLR	0.4450	0.4937	0	5.7627			
SMESIZE	17.3791	1.4274	15.0779	21.6899	15.6567	17.3879	1.7311**
MedBLR	0.5	0.5013	0	1			
BIND	0.1356	0.1729	0	0.5714	0	0.1363	0.1363**
BShares	0.433449	25.8874	0	89.66	0.137	0.434953	29.7954**

*, ** significance level of 5% and 1% respectively

Table 7: Pearson correlation coefficient

	ROA	MA	BLR	SMESIZE	MedBLR	BIND	BShares
ROA	1						
MA	0.1822*	1					
BLR	0.1940**	0.1796*	1				
SMESIZE	0.2252**	0.4015**	0.1940*	1			
MedBLR	-0.656	0.3276**	0.5635*	0.3770*	1		
BIND	-0.0231	0.0204	-0.0495	-0.0522	-0.1096	1	
BShares	-0.0690	0.0013	-0.0481	0.2463*	-0.0594	0.0046	1

*, ** significance level of 5% and 1% respectively

4.3. Testing the Mediation Model

Table 8 reports the stepwise regression results following Baron & Kenny's (1986) mediation framework.

Step 1 (Path c – Total effect): Managerial ability exerts a positive and significant impact on SME performance ($\beta = 0.0614$, $p < 0.01$). This validates H1, supporting Upper Echelons Theory that managerial competence enhances firm outcomes.

Step 2 (Path a – MA $\rightarrow$ BLR): Managerial ability is negatively associated with leverage ($\beta = -89.889$, $p < 0.01$), indicating that capable managers prefer conservative financing policies. This finding confirms H2 and aligns with Pecking-Order Theory, suggesting that skilled executives rely more on internal funds to minimize financing costs and preserve flexibility.

Step 3 (Path b – BLR → ROA): Capital structure has a positive and significant effect on performance ($\beta = 0.0619$, $p < 0.01$), supporting H3 and consistent with the Trade-Off Theory, where moderate debt enhances value through tax advantages and external discipline.

Step 4 (Path c' – Mediation test): When both MA and BLR are included, the coefficient of managerial ability on ROA decreases but remains significant ($\beta = 0.0569$, $p < 0.01$), indicating partial mediation. Thus, H4 is supported—capital structure partially mediates the relationship between managerial ability and firm performance.

Table 8: Testing the mediating effect of CS

	<i>Y=ROA, X= MA, mediator= BLR</i>	
	Coefficient	t-statistics
Path (c): Total effect of X on Y		
MA	0.6147***	3.58
Path (a): X to mediator		
MA	-89.889***	-30.60
Path (b): mediator to Y		
BLR	0.06199***	3.69
Path (c'): Direct effect of X on Y		
MA	0.0569***	
Partial effect of control variables on Y		
SMESIZE	0.0268***	5.14
MedBLR	-0.0513***	-1.44
BIND	-0.0113	-0.16
BShares	-0.00063**	-2.42
R-Squared	0.1937	
F-statistic	9.18***	

Note: *, **, ***Significance levels of 10%, 5% and 1%, respectively

4.4. Bootstrapped Mediation Analysis

To validate mediation robustness, Sobel and Monte Carlo bootstrapping tests were conducted (Table 9). Both tests yield statistically significant indirect effects ($Z = 0.46$ – 0.53 , $p < 0.05$), with 95% confidence intervals excluding zero. These results confirm that capital structure acts as a significant transmission channel through which managerial ability enhances SME performance.

Table 9: Indirect effect of MA on ROA through proposed mediator: BLR

	<i>Observed coefficient</i>	<i>SE</i>	<i>z-value</i>	<i>Percentile 95% CI</i>	
				<i>Lower limit</i>	<i>Upper limit</i>
<i>Sobel</i>	1.166	2.220	0.525**	-3.186	5.517
<i>Monte Carlo</i>	1.018	2.216	0.459**	-3.281	5.583

4.5. Discussion and Theoretical Interpretation

The empirical results provide strong evidence that managerial ability improves SME performance both directly and indirectly via capital structure. These findings align with and extend several theoretical perspectives:

- **Upper Echelons Theory:** The significant positive MA–ROA relationship confirms that managerial competence shapes firm outcomes. High-ability managers leverage knowledge and foresight to optimize operations and strategic decisions (Hambrick & Mason, 1984; Demerjian et al., 2012).
- **Pecking-Order Theory:** The negative MA–BLR relationship demonstrates that capable managers rely more on internal financing, reflecting confidence in internal cash flows and avoidance of costly external debt (Yung & Chen, 2018).
- **Trade-Off and Agency Theories:** The positive BLR–ROA association indicates that moderate debt enhances firm value through tax shields and improved governance, consistent with Ebaid (2009) and Li et al. (2019).

Integrating these findings, the partial mediation effect shows that **managerial ability influences performance not only through operational efficiency but also by shaping optimal financing choices**. High-ability managers appear to adjust leverage to an equilibrium level that balances growth, risk, and control—validating the mediating role of capital structure in the managerial ability–performance nexus.

4.6. Comparative Insights

These findings are consistent with Ting et al. (2021), who document similar mediation effects in Taiwanese firms, but differ in magnitude due to Egypt’s higher borrowing costs and institutional constraints. The Egyptian SME context highlights that while debt enhances discipline, overleveraging remains risky under volatile macroeconomic conditions.

5. CONCLUSION, IMPLICATIONS, and FUTURE DIRECTIONS

In response to Abernethy and Wallis' (2019) call for additional work that sheds light on factors that play a role in facilitating the translation of managerial ability to desirable performance outcomes, this paper is the first to examine the mediating role of capital structure in the association between managerial ability and SME performance in Egypt.

The empirical analysis confirms that managerial expertise exerts a positive and significant effect on SME performance. Moreover, capital structure partially transmits this effect, underscoring its mediating role within the managerial ability–performance nexus.

The study's findings support the idea that managers have a significant economic impact on businesses because they effectively use SME resources to generate higher levels of revenue. As a result, SMEs can afford to offer very attractive compensation packages to attract the best managers.

Our study contributes to the literature in several ways. Firstly, our empirical results contribute to a relatively new but growing body of literature documenting the effects of managerial ability on financial performance and debt financing. Secondly, to the best of our knowledge, our study is the first to document the relationship between managerial ability, capital structure, and firm performance in SMEs. Thirdly, our study also demonstrates the importance of considering mediating factors for the managerial ability–firm performance relationship. We demonstrate that the effect of ability on positive firm outcomes is not constant but can vary, for instance, with capital structure.

Our findings have intuitive implications for practice. First and foremost, consistent with upper echelons theory, we provide further evidence that manager characteristics matter in the context of SME performance. Therefore, investors should evaluate the managerial competence prior to making decisions, as companies with highly skilled managers tend to be more efficient than those with less skilled managers. Furthermore, the board of directors should recruit and retain more competent managers, as these managers are better suited to managing the SMEs assets. Our findings may also offer insights for managers seeking to enhance firm performance and motivate them to enhance their competencies, which can not only safeguard their positions but also enhance their firms' operational performance.

Our study has some limitations that allow for further investigation. To determine whether our conclusions hold, future research could use other proxies for managerial ability. Also, as the COVID-19 pandemic is an exogenous shock to the economy, we suggest that studies may examine the impact of CEOs with higher managerial abilities on firm performance and stock prices during the pandemic. Studies may shed light on other factors that play a role in facilitating the translation of managerial ability into desirable performance outcomes. Finally, it would be intriguing for future research to explore the influence of gender diversity on the relationship between managerial ability and firm performance.

REFERENCES

- Abernethy, Margaret A. , and Mark S. Wallis. 2019. “Critique on the “Manager Effects” Research and Implications for Management Accounting Research.” *Journal of Management Accounting Research* 31 (1): 3-40.
- Ahsan, Habib, and Monzur Hasan Mostafa. 2017. “Managerial ability, investment efficiency and stock price crash risk.” *Research in International Business and Finance* 42: 262-274.

- Ayaz, Muhammad, Shafie Mohamed Zabri, and Kamilah Ahmed. 2021. "An empirical investigation on the impact of capital structure on firm performance: evidence from Malaysia." *Managerial Finance* 47 (8): 1107-1127.
- Baron, Reuben M., and David A. Kenny. 1986. "The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations." *Journal of Personality and Social Psychology* 51 (6): 1173-1182.
- Bertrand, Marianne, and Antoinette Schoar. 2003. "Managing with Style: The Effect of Managers on Firm Policies." *The Quarterly Journal of Economics* 118 (4): 1169-1208.
- Bhutta, Aamir Inam, Muhammad Fayyaz Sheikh, Aroosa Munir, Arooj Naz, and Iqra Saif. 2021. "Managerial ability and firm performance: Evidence from an emerging market." *Cogent Business & Management* 8 (1): 1879449.
- Cannella, A. A., and T. R. Holcomb. 2005. "A multi-level analysis of the upper-echelons model. In Multi-level issues in strategy and methods." (Emerald Group Publishing Limited) 195-237.
- Cekrezi, A. . 2013. "Impact Of Firm Specific Factors On Capital Structure Decision: An Empirical Study Of Albanian Firms." *European Journal of Sustainable Development* 2 (4): 135-135.
- Champion, D. 1999. "Finance: the joy of leverage." *Harvard Business Review* 77: 19-22.
- Cho, Hyungjin, Ga-Young Choi, and Sera Choi. 2021. "Is managerial ability associated with capital structure adjustment speed?" *Asia-Pacific Journal of Financial Studies* 50: 308-333.
- Chuang, T. T., K. Nakatani, and D. Zhou. 2009. "An exploratory study of the extent of information technology adoption in SMEs: an application of upper echelon theory." *Journal of Enterprise information management* 22 ((1/2)): 183-196.
- Cornaggia, Kimberly J., Gopal V. Krishnan, and Changjiang Wang. 2017. "Managerial ability and credit ratings." *Contemporary Accounting Research* 34 (4): 2094-2122.
- Dalwai, T., A. M. Habib, S. S. Mohammadi, and K. Hussainey. 2023. "Does managerial ability and auditor report readability affect corporate liquidity and cost of debt?" *Asian Review of Accounting* (ahead-of-print).
- Demerjian, Peter, Baruch Lev, and Sarah McVay. 2012. "Quantifying managerial ability: A new measure and validity tests." *Management Science* 58 (7): 1229-1248.
- Devine, Å. 2014. "Building a Microfoundation on the basis of the Upper Echelon Theory." *"In Strategic Management Society Special Conference Strategic Management in the Asian Century—Dealing with Dynamism, Diversity and Development.* Sydney, Australia. December 6-8.
- Diéguez-Soto, J., M. J. Martínez-Romero, M. Corten, and A. Michiels. 2022. "The impact of the CEO's financial literacy on family SMEs' growth: the moderating role of generational stage." *Baltic Journal of Management* 17 ((1)): 89-106.
- Duréndez, A., J. Dieguez-Soto, and A. Madrid-Guijarro. 2023. "The influence of CEO's financial literacy on SMEs technological innovation: the mediating effects of MCS and risk-taking." *Financial Innovation* 9 ((1)): 15.
- Ebaid, Ibrahim El-Sayed. 2009. "The impact of capital-structure choice on firm performance: empirical evidence from Egypt." *The Journal of Risk Finance* 10 (5): 427-487.
- Ghosh, C., R. Nag, and C. Sirmans. 2000. "The pricing of seasoned equity offerings: evidence from REITs." *Real Estate Economics* 28: 363-84.
- Golany, B, and Y Roll. 1989. "An application procedure for DEA." *Omega* 17 (3): 237-250.
- Hackbarth, Dirk. 2009. "Managerial traits and capital structure decisions." *Journal of Financial and Quantitative Analysis* 43 (4): 843-881.
- Hadlock, C. J., and C. M. James. 2002. "Do banks provide financial slack?" *the Journal of Finance* 57 (3): 1383-1419.

- Hambrick, D. C., and P. A. Mason. 1984. "Upper echelons: The organization as a reflection of its top managers." *Academy of management review* 9 ((2)): 193-206.
- Hiebl, M. R. 2014. "Upper echelons theory in management accounting and control research." *Journal of Management Control* 24: 223-240.
- Jensen, MC, and WH Meckling. 1976. "Theory of the firm: managerial behavior, agency costs and ownership structure." *Journal of financial economics* 3 ((4)): 305–360.
- Kraus, A., and R. H. Litzenberger. 1973. "A state-preference model of optimal financial leverage." *The journal of finance* 28 (4): 911-922.
- Kumar, Sonal, and Leila Zbid. 2022. "Firm performance during the Covid-19 crisis: Does managerial ability matter?" *Finance Research Letters* 47: 102720.
- Le, T. P. V., and T. B. N. Phan. 2017. "Capital structure and firm performance: Empirical evidence from a small transition country." *Research in international business and finance* 42: 710-726.
- Li, K., J. Niskanen, and M. Niskanen. 2019. "Capital structure and firm performance in European SMEs: Does credit risk make a difference?" *Managerial Finance* 45 (5): 582-601.
- Li, Kang, Jyrki Niskanen, and Mervi Niskanen. 2018. "Capital structure and firm performance in European SMEs- Does credit risk make a difference?" *Managerial Finance* 45 (5): 582-601.
- MacKinnon, D. P., C. M. Lockwood, and J. Williams. 2004. "Confidence limits for the indirect effect: Distribution of the product and resampling methods." *Multivariate Behavioral Research* 39: 99-128.
- Matemilola , B. T., A. N. Bany-Ariffin, W.N. W. Azman-Saini, and Annuar Md Nassir. 2018. "Does top managers' experience affect firms' capital structure?" *Research in International Business and Finance* 45: 488-498.
- McMahon, R. G. . 2004. "Equity agency costs amongst manufacturing SMEs." *Small Business Economics* 22: 121-140.
- Myers, S. C., and N.S. Majluf. 1984. "Corporate financing and investment decisions when firms have information that investors do not have." *Journal of financial economics* 13 (2): 187-221.
- Myers, SC . 1977. "Determinants of corporate borrowing." *Journal of financial economics* 5 ((2)): 147–175.
- Pathak, Rajesh . 2011. "Capital Structure and Performance: Evidence from Indian Manufacturing Firms." *Social Science Research Network Online Web*.
- Petkevich, A., and A. Prevost. 2018. "Managerial ability, information quality, and the design and pricing of corporate debt." *Review of Quantitative Finance and Accounting* 51: 1033-1069.
- Raharja, B. S., N. K. Bachtiar, and M. R. Ab Aziz. 2022. "The behavioural dimension of SME's owner on affecting the financial decisions." *Business: Theory and Practice* 23 ((1)): 60-69.
- Roden, D. M., and W. G. Lewellen. 1995. "orporate capital structure decisions: evidence from leveraged buyouts." *Financial Management* 76-87.
- Salim, M., and R. Yadav. 2012. "Capital structure and firm performance: Evidence from Malaysian listed companies." *Procedia-Social and Behavioral Sciences* 65: 156-166.
- Simamora, A. J. 2021. "Firms performance, risk taking and managerial ability." *International Journal of Productivity and Performance Management* 72 (3): 789-808.
- Sobel, M. E. 1982. "Asymptotic confidence intervals for indirect effects in structural equation models." *Sociological Methodology* 13: 290-312.
- Statisits, Central Agency for Public Mobilization and. 2020. *Census Data* . Cairo: The Central Agency for Public Mobilization and Statisits .
-

- Strebulaev, I. A. 2007. "Do tests of capital structure theory mean what they say?" *The journal of finance* 62 (4): 1747-1787.
- Ting, I. W. K., I. Tebourbi, W. M. Lu, and Q. L. Kweh. 2021. "The effects of managerial ability on firm performance and the mediating role of capital structure: evidence from Taiwan." *Financial Innovation* 7: 1-23.
- Ting, Irene Wei Kiong, Imen Tebourbi, Wen-Min Lu, and Qian Long Kweh. 2021. "The effects of managerial ability on firm performance and the mediating role of capital structure: evidence from Taiwan." *Financial Innovation* 7: 1-23.
- Ting, Irene Wei Kiong, Imen Tebourbi, Wen-Min Lu, and Qian Long Kweh. 2021. "The effects of managerial ability on firm performance and the mediating role of capital structure: evidence from Taiwan." *Financial Innovation* 7 (89).
- Trueman, B. 1986. "Why do managers voluntarily release earnings forecasts?" *Journal of accounting and economics* 8 (1): 53-71.
- Wang, Chenguang, and Maryam Rokhshi. 2024. "Does managerial ability affect debt maturity?" *Accounting and Auditing with Applications* 1 (1): 27-35.
- Xu, Q., G. D. Fernando, and R. A. Schneible. 2022. "Age diversity, firm performance and managerial ability." *Review of Accounting and Finance* 21 (4): 276-298.
- Xu, Qiao, Guy Dinesh Fernando, and Richard A. Schneible. 2022. "Age diversity, firm performance, and managerial ability." *Review of Accounting and Finance* 21 (4): 276-298.
- Yung, K., and C. Chen. 2018. "Managerial ability and firm risk-taking behavior." *Review of Quantitative Finance and Accounting* 51 (4): 1005-1032.
- Yung, Kenneth, and Chen Chen. 2018. "Managerial ability and firm risk-taking behavior." *Review of Quantitative Finance and Accounting* 51: 1005-1032.

هيكل رأس المال كآلية وسيطة بين قدرات المديرين وأداء الشركات الصغيرة والمتوسطة: دليل من مصر

ياسمين مجدى رجب¹، سلوى منير القاضي²، محمد أحمد صالح¹

¹ مدرس المحاسبة، قسم المحاسبة والتمويل، كلية الإدارة وذكاء الأعمال، الجامعة الحديثة للتكنولوجيا والمعلومات

² مدرس الإدارة، قسم الأعمال والتسويق، كلية الإدارة وذكاء الأعمال، الجامعة الحديثة للتكنولوجيا والمعلومات

mohamed.amsaleh@gmail.com

ملخص البحث

هدفت هذه الدراسة إلى فحص كيفية توسّط هيكل رأس المال في العلاقة بين قدرات المديرين وأداء الشركات الصغيرة والمتوسطة المصرية. وقد تم استخدام عدد 198 مشاهدة سنوية لشركات من 22 شركة صغيرة ومتوسطة مُدرجة في بورصة النيل خلال الفترة (2014-2022). تم قياس قدرات المديرين باستخدام تحليل مغلف البيانات (DEA) وفقاً لمنهج Demerjian وآخرين (2012)، بينما تم تمثيل هيكل رأس المال بنسبة الرافعة المالية، وقد استُخدمت طريقة الانحدار الثلاثي وخطوات الاختبار المعزز (Bootstrapped Mediation) لتحليل أثر الوساطة الذي يؤديه هيكل رأس المال بين قدرات المديرين وأداء الشركات (المقاس معدل العائد على الأصول). أظهرت نتائج الدراسة أن قدرات المديرين تحسّن أداء الشركات الصغيرة والمتوسطة بشكل ملحوظ. كما تبين وجود علاقة سلبية بين قدرات المديرين والرفع المالي، في حين أن الرفع المالي يرتبط إيجابياً بالأداء. ويثبت التحليل أن هيكل رأس المال يتوسط جزئياً العلاقة بين قدرات المديرين والأداء، مما يدعم كلاً من نظريتي المفاضلة والنخب الإدارية العليا. تحقق الشركات الصغيرة والمتوسطة التي يقودها مديرون ذوو كفاءة عالية أداءً أفضل من خلال قرارات تمويلية أكثر كفاءة. لذا، ينبغي على مجالس الإدارة والمستثمرين إيلاء أولوية لتقييم كفاءة المديرين عند التعيين أو التقييم. تُعد هذه الدراسة أول دليل تجريبي من مصر يوضح كيف يقوم هيكل رأس المال بدور القناة التي تنتقل عبرها تأثيرات قدرات المديرين على نتائج الشركات الصغيرة والمتوسطة، من خلال دمج عدة أطر نظرية في نموذج وساطة موحد.

الكلمات المفتاحية: كفاءة الإدارة، العائد على الأصول، الرفع المالي، نظرية المفاضلة.