Modeling the Relationship Between Market Orientation, Learning Orientation, and Performance of Moroccan SMEs: A Structural Equation Approach

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Abstract. In the field of entrepreneurship, Small and Medium Enterprises (SMEs) are highly regarded due to their substantial contributions to growth, development, and innovation. In Morocco, SMEs constitute nearly 97% of the country's production sector, span various industries, generate 38% of national wealth 74% of the workforce, as per the 2021 report from the Moroccan SME Observatory. However, in the face of international trade liberalization, these businesses face intense domestic market competition, impacting their competitiveness and performance. This study explores the significance of 'market orientation' and 'organizational learning orientation' as crucial managerial practices, enabling SMEs to gain competitive advantages, market differentiation, and higher performance. Utilizing the resource-based view and dynamic capabilities theory, the research investigates how learning orientation transforms market practices into improved organizational performance. The study distributed a questionnaire to 113 Moroccan SME managers and applied the Partial Least Squares Structural Equation Modeling (PLS-SEM) method to test hypotheses. The results indicate a positive impact of market orientation on Moroccan SME performance. Additionally, the study uncovers a partial mediating effect of organizational learning orientation in this relationship. These findings suggest that enhancing organizational learning orientation can amplify the benefits of market orientation for Moroccan SMEs, providing valuable insights for strategic decisions aimed at enhancing overall performance.

Keywords: modeling, structural equations, market orientation, learning orientation, performance, Moroccan SMEs.

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1 Introduction

In Morocco, SMEs are the central pillar of the economy, contributing significantly to wealth creation and entrepreneurial dynamics [1]. However, following the signing of numerous free trade agreements since the 2000s by Morocco with partner countries, Moroccan SMEs are often faced with specific challenges linked to their competitive environment, limited resources and capacity to adapt. As a result, the performance and competitiveness of these companies may be at stake. Thus, this work suggests that market orientation and organizational learning orientation may constitute key managerial practices that could potentially boost the performance and competitiveness of Moroccan SMEs in the face of this competitive environment [2–6].

According to Narver & Slater (1990), Market Orientation is a strategy focused on understanding customer needs, monitoring the competition and collaborating effectively across business functions to adapt to market changes, meet customer expectations and maintain a competitive edge [3]. Furthermore, Sinkula et al (1997) [5] consider that organizational learning orientation refers to a company's ability to actively gather, assimilate and apply knowledge to improve performance and efficiency. It implies a mindset open to change, a willingness to explore new ideas and the ability to learn from experience [8].

Additionally, there is a gap in the existing literature concerning the understanding of potential synergies created by the interaction of market orientation and organizational learning orientation within organizations [9]. This study aims to explore how these two variables interact together to influence the performance of Moroccan SMEs.

This work refers to the Resource-Based View developed by Barney (1991) [10] and the Dynamic Capabilities theory developed by Teece et al (1997) [11] to explain the theoretical link between market orientation, learning orientation, and the performance of Moroccan SMEs. According to the Resource-Based theory, strategic orientations, particularly market orientation, are often considered as resources that promote innovation, the acquisition of a competitive advantage, and the improvement of firm performance [2, 11, 12].

Based on the literature, two pioneering studies have demonstrated the positive link between market orientation and SME performance. The first study by Narver and Slater (1990) [3], titled "*The effect of a market orientation on business profitability*" emphasizes that market-oriented companies achieve higher profitability compared to those that are not. This research highlights the importance of adapting to the needs and desires of customers to achieve better financial results.

The second study by Jaworski and Kohli (1993) [14], entitled "*Market orientation: Antecedents and consequences*", showed that market-oriented SMEs are able to better understand customer needs and expectations, enabling them to develop more appropriate product and service offerings.

In addition, a study conducted immediately after this work by Slater and Narver (1994) [15], entitled "*Market Orientation, Customer Value, and Superior*", revealed that companies that implement a proactive, systematic market orientation are better able to detect and exploit market opportunities more effectively. This enables them to gain a competitive edge and outperform their rivals.

Therefore, research on market orientation has proliferated in the decades following these foundational works. The positive link between market orientation and SME performance has been extensively explored in academic literature. Indeed, numerous empirical studies across various contexts have demonstrated that SMEs adopting a strong market orientation achieve better financial and non-financial performances. For example, studies conducted by Ali et al (2020) in Saudi Arabia [16], Zhang et al (2017) in China [17], Wasim et al (2022) in the United Kingdom [13], Presutti & Odorici (2019) in the Italian context [12], Oduro &

Haylemariam (2019) in Ghana and Ethiopia [18], and Mathafena & Msimango-Galawe (2023) in South Africa [19].

However, the Dynamic Capabilities theory developed by Teece et al (1997) suggests that "*Resources alone*" do not ensure sustained and enduring performance. Indeed, according to Wang (2008) [6] these resources (market orientation in our case) must be accompanied by a learning orientation to create a capacity to adapt to market dynamics and gain a sustainable competitive advantage.

Furthermore, Slater & Narver (1995) suggest that "*Market orientation enhances performance only when coupled with a learning orientation*" [20]. Similarly, Bell et al (2002) considers that "*organizational learning is essential to the process of developing market knowledge and is a driving force within market-oriented organizations*" [21].

For Martinez (2017) [22] and Mavondo et al (2005) [23], assert that without a culture of learning, it is unlikely for market orientation to be sustained, and the two concepts distinguish themselves while mutually complementing each other. In the same vein, Ozdemir et al (2017) [24] argue that SMEs that are market-oriented are fast learners because these businesses anticipate market requirements ahead of their competitors.

Empirical studies conducted in various contexts provide robust evidence that a learning orientation yields superior outcomes, including better growth, a strong competitive advantage, high adaptability, and improved performance. For example, Kakapour et al (2016) in the Iranian context [25], Abbade et al (2012) in Brazil [26], Yang et Huang (2018) in Taiwan [27] and Gálvez et al. (2011) [28] in Colombia.

Therefore, this present study aims to examine the impact of market orientation on the performance of Moroccan SMEs, taking into account the mediating role of organizational learning orientation. Thus, we can now formulate our research hypotheses:

Hypothesis H₁: *Adopting market orientation has a positive and direct impact on the performance of Moroccan SMEs*

Hypothesis H₂: *Adopting a "market orientation" promotes the development of an "organizational learning orientation" in the context of Moroccan SMEs.*

Hypothesis 3: *Adopting an organizational learning orientation positively and directly impacts the performance of Moroccan SMEs.*

Hypothesis 4: *'Organizational learning orientation' mediates the relationship between 'market orientation' and 'SME performance'.*
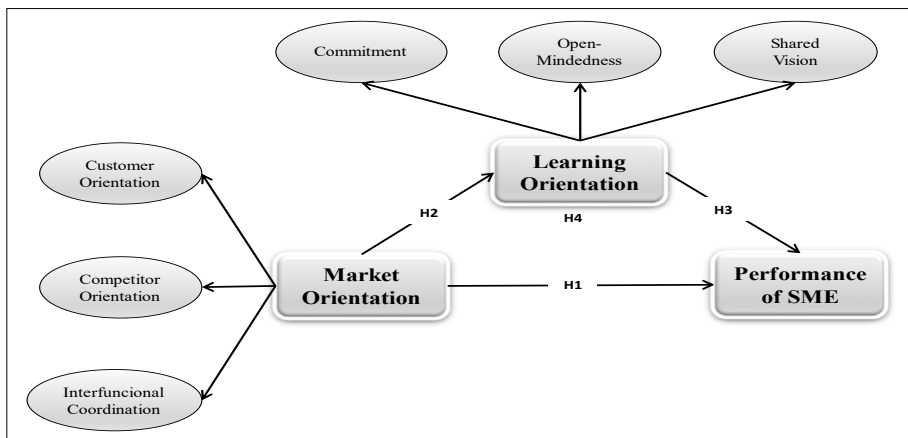

Fig. 1. Conceptual Research Model.

2 Material and Methods

2.1 Sample Size and Data Collection

In order to analyze the relationships between market orientation, learning orientation, and the performance of Moroccan SMEs, this study adopted a methodology based on a positivist paradigm, following a hypothetico-deductive approach.

The sample selection in our study was conducted using a non-probabilistic convenience sampling method where respondents were selected based on their availability and accessibility. We chose this method due to the convenience and efficiency it offers for quickly accessing SMEs participating in our research.

Our sample consists of 113 Moroccan SMEs operating in diverse sectors, including industry, services, technology, commerce, and others, to ensure adequate representation of different sectors.

A questionnaire containing affirmative questions elaborated on a 5-point Likert scale ranging from 'Strongly Disagree (1)' to 'Strongly Agree (5)' was distributed to SME executives a scientific research agreement signed with the "*Moroccan Purchasing Community Association*"[†] and the "*Association of Moroccan Business Managers Club*"[‡]

For data analysis, the study first employed exploratory factor analysis using SPSS, after which measurement indicators with low factor loading were removed. Structural Equation Modeling (SEM) was the main tool used to estimate the model and test the research hypotheses. Indeed, this choice is based on several fundamental reasons. Firstly, this method is particularly suitable for studies involving small sample sizes, a characteristic commonly encountered in research on SMEs. Moreover, it efficiently models complex relationships between latent variables and their measurement indicators, which is common in the fields of social sciences and management [29].

2.2 Measurement of Variables.

The operationalization of variables was conducted based on measurement scales borrowed from the literature. These scales have been previously validated, and their reliability has been demonstrated through various studies. Therefore, they were chosen for use in this study.

2.2.1 Independent variable

For the independent variable 'Market Orientation' we adopted the measurement scales from Narver & Slater (1990) [3]. Thus, the 'Customer Orientation' dimension is measured by five items, the 'Competitor Orientation' dimension is measured by three items, and the third dimension 'Interfunctional Coordination' is measured by four items.

2.2.2 Mediator variable

The mediating variable 'Learning Orientation' was measured using Sinkula et al.'s (1997) scale [5], composed of three dimensions: 'Commitment to learning', measured by four items, 'Open-Mindedness' measured by three items, and the third dimension 'Shared Vision' was measured by four items.

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2.2.3 Dependent variable

Finally, the dependent variable 'SME Performance' was considered unidimensional and assessed using 6 items from the works of Engelen et al. (2015) [30], Hughes & Morgan (2007) [31], and Vorhies & Morgan [32]. These items include sales and market share growth, customer satisfaction and loyalty levels, and profit and return on investment growth.

3 Results and Discussions

An initial examination of the data was carried out utilizing SPSS software to tackle concerns like missing values, outliers, and deviations from data normality. Following this, the main analysis was executed employing Smart PLS 4. The assessment of the measurement model involved scrutinizing reliability and validity values, with hypotheses subjected to testing through the bootstrapping method to evaluate the significance of theoretical associations.

3.1 Structural Equation Modeling Analysis

The present study adopted Structural Equation Modeling (SEM) using the Partial Least Squares (PLS) technique, a variance-based modeling method that performs well when dealing with small sample sizes and non-normally distributed data [33]. This approach is widely used in management research fields. It is particularly suited for models with multiple and complex relationships, focusing on hypothesis prediction and testing [33]. Moreover, this method allows simultaneously testing multiple hypothetical relationships [34].

3.1.1 The convergent and discriminant validity of the measurement model

The Convergent validity is a measure that evaluates the consistency of measurements or indicators of a latent variable in a research model. It ensures that different measurements of the same construct converge toward the same underlying concept, meaning they effectively measure the same thing [35]. The examination of convergent validity involves assessing parameters such as Outer Loadings, Average Variance Extracted (AVE), and Composite Reliability (CR). It is considered acceptable if loading values are ≥ 0.7, AVE is ≥ 0.5, and CR is ≥ 0.7 [33]. The outcomes of the reliability and convergent validity indicators for our measurement model are detailed in Table 1 and illustrated in Figure 3 below.

Table 1. Values of reliability and convergent validity indicators.

Constructs	*Items*	*Loading*	*(α)*	*(CR)*	*(AVE)*
Customer Orientation	Custom1	0,707	0,846	0,855	0,621
	Custom2	0,767			
	Custom3	0,853			
	Custom4	0,835			
	Custom5	0,770			
Competitor Orientation	Compet1	0,722	0,834	0,836	0,750
	Compet2	0,876			
	Compet3	0,874			
Interfunctional coordination	Cord1	0,871	0,844	0,847	0,681
	Cord2	0,803			
	Cord3	0,831			
	Cord4	0,795			

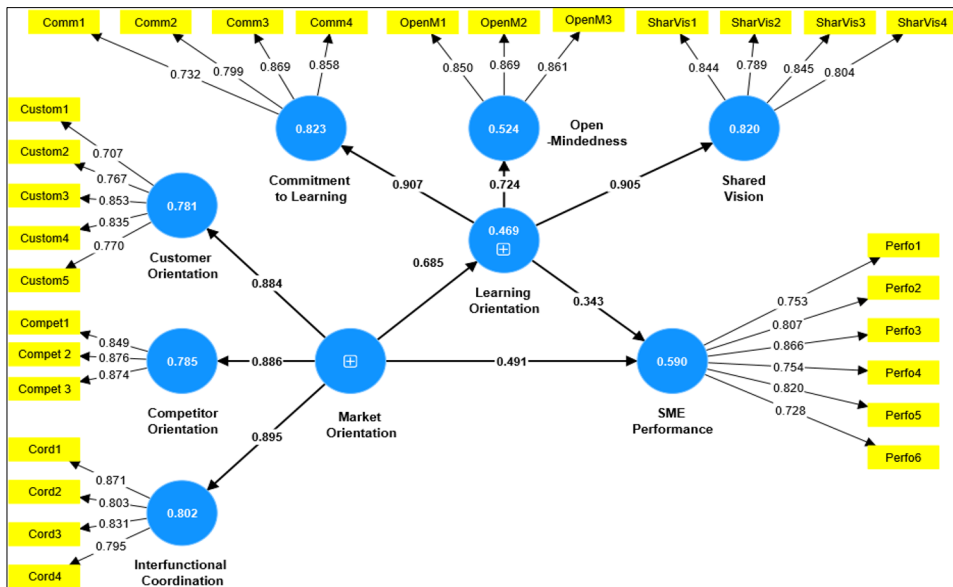|					
Commitment to Learning	Comm1	0,732	0,832	0,844	0,666
	Comm2	0,799			
	Comm3	0,869			
	Comm4	0,858			
Open-Mindedness	OpenM1	0,850	0,824	0,824	0,740
	OpenM2	0,869			
	OpenM3	0,861			
Shared Vision	SharVis1	0,844	0,839	0,842	0,674
	SharVis2	0,789			
	SharVis3	0,845			
	SharVis4	0,804			
Performance SMEs	PerF1	0,753	0,878	0,881	0,623
	PerF2	0,807			
	PerF3	0,866			
	PerF4	0,754			
	PerF5	0,820			
	PerF6	0,728			

Fig. 3. Path Execution Results on SmartPls.

Examining the above results, it can be noticed that all the values of loadings and composite reliability for different latent variables are above 0.7. Similarly, the AVE indicator shows values higher than 0.5. Therefore, our model meets the criterion for convergent validity in this study.

For discriminant validity, it examines whether the measurement indicators (items) of a latent variable are more correlated with each other than with measurements from other latent variables, demonstrating that each construct measures a unique and distinct concept [36]. The Fornell & Larcker criterion (Table 2) is one of the most commonly used techniques to assess discriminant validity in the context of structural equation modeling [33].

Table 2. Discriminant Validity Based on Fornell & Larcker Criterion.

	Compet	Custom	Engag	Coord	OpenM	Perfo	SharVis
Compet	**0,866**						
Custom	0,67	**0,788**					
Engag	0,504	0,561	**0,816**				
Coord	0,744	0,644	0,602	**0,825**			
OpenM	0,386	0,435	0,497	0,4	**0,86**		
Perfo	0,607	0,643	0,621	0,676	0,521	**0,789**	
SharVis	0,538	0,497	0,754	0,649	0,49	0,588	**0,821**

The analysis of discriminant validity based on the Fornell & Larcker criterion indicates that the AVE of each construct explains the variance of its own measurement indicators better than the variance of other latent variables. Therefore, our research model satisfies the second criterion of discriminant validity.

3.1.2 Structural Model Evaluation

The evaluation of the structural model is conducted in two distinct phases. The first step involves verifying the relevance and predictive quality of the model. This evaluation refers to four essential indicators [33]: the coefficient of determination R^2, the Goodness of Fit (GOF) and the predictive relevance Q^2. Then, the second step of the structural model evaluation involves testing the research hypotheses using the P-value indicator. Indeed, the P-value must be less than 0.05 for the research hypotheses to be confirmed [33], [37].

- *Coefficient of determination R^2*

Cohen (1988) assesses R^2 across three levels (0.26: Significant, 0.13: Moderate, 0.02: Weak) [38], while Croutsche (2002) deems a model significant if R^2 is above 0.10, weak if it has a coefficient ranging between 0.05 and 0.10, and non-significant if it is below 0.05 [39].

The following table presents the R^2 values of the two dependent variables in our model:

Table 3. R^2 indicator values for structural model dependent variables.

	R-square
Learning _Orientation	0,469
SME _Performance	0,590

Source: Extract from the results of the Path run on SmartPLS 4.0

The results from the analysis of the coefficient of determination R^2, as presented in Table N3, reveal the absence of non-significant or weak R^2 values in our model. In fact, the independent variable 'Market Orientation' explains approximately 46.69% of the variance in the 'Learning Orientation' variable, and the two variables 'Market Orientation' and 'Learning Orientation' together explain 59% of the variance in the 'SME Performance' variable. Therefore, we can conclude that the independent variables in our model make a significant contribution to predicting the dependent variables.

- *Evaluation of the Model Fit Quality (GOF):*

Tenenhaus et al. (2005) propose calculating the Goodness of Fit (GOF) index to assess the quality of the model fit [40]. The manually calculated GOF value must exceed 36% for the model to be relevant. Table 4 presents the results of the GOF calculation.

Table 4. Structural model goodness-of-fit assessment.

	AVE	*R Square*
Market Orientation	0,531	-----
Learning Orientation	0,505	0,469
SME Performance	0,623	0,590
Somme	1,659	1,059
Moyenne	0,553	0,5295
GOF	= √(0,553x0,529) = 0,54112244	

Source: Developed by the authors based on the results of the PLS algorithm

The obtained results yield a GOF of 54.11%, a value higher than the recommended threshold of 36%. Consequently, the quality of the relationships between latent variables (structural model) and between each latent variable and its measurement indicators (measurement model) is deemed good and relevant.

• *Assessment of predictive relevance Q^2*

The Q^2 indicator, initially proposed by Geisser (1974) [41], is a statistical tool commonly used to assess the predictive quality of a model. In other words, it evaluates the model's ability to explain and anticipate the observed results in the data. According to Fornell and Cha (1994), a positive Q^2 value indicates a better predictive relevance of the model, while a negative value suggests a poorer fit between the theoretical model and the actual data [42]. Q^2 values are obtained using the 'Blindfolding' technique in the SmartPLS (Table 5).

Table 5. Evaluation of the Predictive Quality of the Model (Q-square)

	Q^2 predict
Learning _Orientation	0,456
SME _Performance	0,514

Source: Compiled by the authors on the basis of "Blindfolding" results

The results indicate the presence of positive Q^2 values. Therefore, our model exhibits good predictive quality.

• *Hypothesis Testing*

To test the validity of our hypotheses, we rely on the P-Value test. For a causal relationship between an independent variable and a dependent variable to be significant, the p-value must be less than 0.05 [33], [37]. This evaluation will be performed using the resampling technique (Bootstrapping) by recalculating the model parameters with a sample of 5000 using the SmartPLS. The results regarding the various formulated hypotheses are summarized in Tables 6 and 7 presented below.

Table 6. Analysis of Direct Relationships between Constructs

Hypotheses	*(β)*	*(M)*	*(SD)*	*(T)*	*(P)*	*Validation*
H_1: MO → Performance	0,491	0,489	0,107	4,608	0,000	*Supported*
H_2: MO → LO	0,685	0,687	0,072	9,486	0,000	*Supported*
H_3: LO → Performance	0,343	0,348	0,116	2,951	0,003	*Supported*

Notes: β: Coefficient, SD: Standard deviation, T: T-statistics (|O/STDEV|), P: P-values, MO: Market Orientation, LO: Learning Orientation.

The results obtained through bootstrapping indicate a positive and significant impact of market orientation on the performance of Moroccan SMEs ($\beta = 0.780$, $p = 0.000$), thereby providing support for hypothesis H1. Moreover, the presented table reveals a positive and significant association between market orientation and organizational learning, reflected by a coefficient $\beta = 0.691$ and a P-value of 0.000 (below the significance threshold of 0.05), confirming hypothesis H2. Similarly, the positive correlation between organizational learning and SME performance is supported, as evidenced by a coefficient $\beta = 0.353$ and a P-value of 0.009. Hence, hypothesis H3 has been validated.

To test the mediating effect of innovation orientation, we conducted a secondary analysis (Table 7)

Table 7. Mediation Analysis

Total effect		Direct effect		Indirect effect				
MO→Performance		MO→ Performance		MO → LO → Performance				
(β)	(P)	*(β)*	(P)	*(β)*	(SD)	(T)	(P)	CI
0,726	0,000	0,491	0,000	0,235	0,089	2,628	0,009	0,084; 0,429

Notes: β: Coefficient, SD: Standard deviation, T: T-statistics (|O/STDEV|), P: P-values, MO: Market Orientation, LO: Learning Orientation, CI: Confidence intervals (2.5% ;97.5%)

As per the information in Table 7, the outcomes affirm the significance of the total effect of the variable "Market Orientation" on "SME Performance" ($\beta = 0.726$, $t = 14.148$, $p = 0.000$). Furthermore, even in the presence of the variable "Organizational Learning Orientation," this impact remains significant ($\beta = 0.491$, $p = 0.000$). Likewise, the results demonstrate a positive and significant indirect effect ($\beta = 0.235$, $t = 2.628$, $p = 0.009$) between market orientation and SME performance through organizational learning orientation. These results suggest that the link between "Market orientation" and "SME Performance" is partially mediated by " Organizational Learning Orientation ". Hence, hypothesis H4 is substantiated.

4 Conclusion

The study examined the impact of market orientation on the performance of Moroccan SMEs, taking into account the role of organizational learning orientation. The analysis of the results confirmed the validity of all the research hypotheses formulated.

The first hypothesis of the study examined the relationship between market orientation and SME performance, and this relationship was found to be positive. By focusing on the market, SMEs can better respond to changing customer needs, face competition threats, and identify new opportunities. This translates into improved performance and strengthens their position in the market. This result provided empirical support to conclusions put forth in other contexts by Bamfo & Kraa [17]; Han et al. [18] ; Mathafena & Msimango-Galawe [19]; Naheed [20] ; Varghese et al. [21] ; Zhang et al. [22] ; Wasim et al. [23] ; Presutti & Odorici [24] ; Oduro & Haylemariam [25].

Furthermore, the study confirmed the second hypothesis regarding the link between market orientation and organizational learning orientation. A strong market orientation means that the company is focused on understanding the needs of its customers, competitors, and business environment. This deep understanding of the market constantly encourages the company to learn, adjust, and innovate to remain competitive. In other words, an effective market orientation creates an environment conducive to organizational learning, thus fostering the development of new skills, knowledge, and a culture of adaptability within the company. These results align with several other empirical studies conducted in different

contexts. For example, studies by Keskin [26] ; Khan & Bashir [27] ; Mantok et al. [28] ; Raj & Srivastava [29] ; Slater & Narver [30] ; Suliyanto & Rahab [31].

Similarly, the study results also confirmed the third hypothesis that continuous learning orientation within SMEs promotes the acquisition of new skills, adaptation to market changes, and innovation. This dynamic enhances the quality of products or services, increases customer satisfaction, and stimulates growth, leading to an overall improvement in SMEs' performance. These conclusions align with the works of Kakapour et al. [32] ; López et al. [33]; Abbade et al. [34] ; Yang and Huang [35] ; Gálvez et al. [36].

Finally, the fourth hypothesis was also supported. It was found that learning orientation has a partial mediating effect on the relationship between market orientation and the performance of Moroccan SMEs.

These findings offer important theoretical and managerial implications for management science research and SME practice. Theoretically, they enrich the existing literature on understanding the mechanisms through which SMEs can enhance their overall performance, paying particular attention to market orientation and learning. Managerially, the results of this research provide relevant guidance for decision-makers and practitioners to steer their strategies and actions within Moroccan SMEs. Therefore, leaders should encourage a strategy of alignment between business objectives and learning initiatives within the company. This means that employee learning and development plans should be designed to directly address market needs and business goals. By closely integrating these two aspects, the SME can maximize its adaptive potential and performance improvement by leveraging learning to achieve its performance objectives.

However, it is important to note some limitations and future perspectives inherent in this study. Firstly, the sample size, although carefully selected and analyzed, remains relatively modest. Further research could be conducted with larger samples to further confirm and generalize the obtained results. Additionally, it is important to note that despite their formulation from the literature, the indicators chosen to measure certain variables might have limitations in their comprehensiveness. Therefore, opportunities exist for future researchers to broaden the field by incorporating new indicators. Also, although the study highlighted the mediating role of learning orientation, other potential variables could also be examined. Thus, it would be beneficial to explore the effect of other contingent factors or reverse the causality of variables.

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