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# The Moderating Role of Environmental Turbulence between Learning Orientation and SME Performance in the Manufacturing Sector of Pakistan

Ali SAJJAD<sup>1</sup>, Yusnidah IBRAHIM<sup>2</sup>, Jauriyah SHAMSUDDIN<sup>3</sup>

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## Abstract

**Purpose:** This study attempts to investigate the moderating effects of environmental turbulence (ET) between learning orientation (LO) and SMEs' performance. **Research design, data, and Methodology:** To gain insights and provide implications for manufacturing SMEs in Pakistan, this study adopted simple random sampling to collect 379 valid responses. Data were collected through a self-administrative questionnaire from manufacturing SMEs owners/managers. Partial least squares of structural equation modeling have been used to test research hypotheses by using SmartPLS® 3.0 software. **Results:** The study's primary finding is that LO has a significantly positive effect on SMEs' performance and this relationship is strengthened under the moderating influence of environmental turbulence (ET). **Conclusion:** Environmental turbulence (ET) enables SMEs to focus on learning capability to get a more competitive advantage. Moreover, SMEs owner/managers ought to emphasize continuous learning that accentuates the capability to compete with environmental changes. Findings support notifying Pakistan's Small and Medium Enterprise Development Authority (SMEDA) in dealings with Manufacturing SMEs in terms of improving their internal capabilities. This research contributes to the literature as it provides a more detailed and in-depth explanation of distribution management-related issues faced by SMEs. This research carries a significant influence on literature and relevant Resource-based view and contingency theories.

**Keywords:** Performance, SMEs, Learning Orientation, Manufacturing, Distribution Management, Competitiveness, Environmental Turbulence, Wholesaling, and Retailing

**JEL Classification Code:** L60, M13, M10

## 1. Introduction

SMEs have the foremost support for the country's development and growth (Hoque, Awang, & Salam, 2017). They are also recognized for employment creation (Asad, Haider, & Fatima, 2018). SMEs play a very crucial role in countries' progress, particularly in less developed countries.

SMEs contributed to their exports and turn them into successful economies (Chege & Wang, 2020). In Pakistan, SMEs contribute around 35% in total value additions, 80% to non-agricultural employment, and 40% to export and GDP (Shah & Syed, 2018). For SMEs, Pakistan needs to realize the importance of this sector because it is playing a

1 First Author or corresponding author. Ph.D. Candidate, School of Economics Finance and Banking, Universiti Utara Malaysia, Sintok, Malaysia. Email: [alisajjad@gmail.com](mailto:alisajjad@gmail.com)

2 Second Author. Professor, School Business and Social Sciences, Albukhary International University. Email: [yusnidah.ibrahim@aiu.edu.my](mailto:yusnidah.ibrahim@aiu.edu.my)

3 Third Author. Associate Professor, School of Business Management, Universiti Utara Malaysia, Sintok, Malaysia. Email:

[jauriyah@uum.edu.my](mailto:jauriyah@uum.edu.my)

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very crucial role in developing economies during the last two decades.

The present study selected the manufacturing (textile) sector for research. The reason behind this is that the textile sector is the crucial manufacturing sector of Pakistan and the backbone of the economy. Pakistan's textile sector contributed to employment and the trade balance. It contributes around 40% of employment to the manufacturing labor force and 60% to the country's total export. But manufacturing (textile) sector of Pakistan not performing at its best level due to various issues like lack of expertise, unskilled human resources, and environmental challenges (Kazmi & Takala, 2014). There is a lack of research in Pakistan's manufacturing sector (Khan, 2017). Likewise, Services sector SMEs directly or indirectly engage customers in their operations and they are more people-centered as compared to manufacturing SMEs (Jiang, 2009). Due to a lack of learning, SMEs have also faced challenges in their distribution management including manufacturing, retailing, and wholesaling process.

SMEs are confronted with intense competitive pressure in this contemporary era. To ensure long-term developments and to be able SMEs must enhance their competency level. Many strategies and tools enable them to deal with obstacles and respond to changes to get a competitive advantage and enhance their performance (Kraśnicka, Głód, & Wronka-Pośpiech, 2016; Yang, 2020). According to Linares and Fernandez (2020) strategic orientation and SMEs, performance relationship has been an area of focus. Learning orientation is the part of strategic orientation, which refers to the firm value that affects the firm ability and tendency to generate knowledge, disseminate and exploit. Moreover, firms must integrate learning processes while competing in changing and dynamic environment. Therefore, by focusing on customer perception and by effectively satisfying visible and invisible customer needs, learning orientation (LO) may yield various positive outcomes such as increased flexibility and profitability, desirable quality access, the success of new products, and customer maintenance. Furthermore, learning orientation (LO) also allows firms to quickly respond to new and existing environmental opportunities and threats. Martin and Javalgi (2016) assert learning as a strategy to govern and integrate both internal and external environments.

This study notifies thinking in this field and provides guidelines to improve learning strategy formulation to support the distribution process of SMEs. Despite major contributions to the economy and all these importance, the Pakistani SMEs sector facing various challenges (Raza, Minai, & Hashim, 2018). The weak performance of SMEs is highlighted by many researchers (Al-Talib, Ali, Suhaimi, Rosli, Othman, Mansor, Shah, Ariffin, & Khateeb, 2016). The survival and stability of Pakistani SMEs are

questionable because 95% is the failure rate of SMEs in the early five years (Qurashi, Khalique, Ramayah, Bontis, & Yaacob, 2020). To grow and survive in the competitive environment, both small and large organizations need to deploy the strategic orientation (e.g. LO) (Jabeen & Mahmood, 2015). SMEs need to identify their core capabilities of learning orientation and assess the current performance of distribution management for betterment. Literature on strategic orientation showed less attention to learning orientation (Hakala, 2011). The majority of the research has concentrated on large-scale organizations for learning orientation (Fang, Chang, Chu Ou, & Hui Chou, 2014). In developing countries, there is a lack of research in terms of SMEs' performance and learning orientation including Pakistan (Chiang, 2018; Fang et al., 2014). Additionally, terrible turbulences are created due to potential customer expectations, rapid changes in technology, and globally intense competition thus, manufacturing companies trying to get a competitive advantage (Jeihoon, Jabarzadeh, Kumar, & Reyes, 2019). While researchers believe that businesses need to cultivate the capabilities of learning and strive to create new knowledge (Bae & Choi, 2021). The rationale for conducting this research originates from the existing literature that highlights that there is still little research on learning orientation and SME performance (Wahyuni & Sara, 2020). Furthermore, prior studies majorly focused on developed economies, while this study is conducted in a developing country's context (Pakistan) due to a dearth of research. SMEs have not studied their external environment. Moreover, more than 95% of SMEs are failed in their initial stages. This study also fills the gap by considering the moderating effect of environmental turbulence, especially in the textile industry of Pakistan. Thus, this research examines the moderating effect of Environmental Turbulence (ET) between LO and SMEs performance.

Hence, the study objectives are:

- i. To examine the relationship between learning orientation and SME performance.
- ii. To determine the moderating effect of environmental turbulence in the relationship between LO and SME performance.

## **2. Literature Review and Hypothesis Developments**

### **2.1. Learning Orientation**

Strategic orientations are the fundamental drivers of managerial action and decision-making (Hakala, 2011). The concept of learning orientation was developed by the Learning orientation concept develop (Sinkula, Baker, &

Noordewier, 1997). According to Baker and Sinkula (1999), learning orientation has three dimensions including shared vision, commitment to learning, and open-mindedness. Open-mindedness is the firm proactively disrupts the procedure, long-held processes, assumptions, beliefs, techniques, and routines needed to absorb culture and climate and culture superior performance (Adamu, 2014). Commitment to learning indicates the significance level of a firm which is linked with learning and the ability to ruminate on the effects of their actions (Sonobe, Hu, & Otsuka, 2004). Likewise, a Shared vision brings a high level of energy, dedication, and resolution by all individuals focused. To ensure harmony throughout the organization, a shared vision can improve the quality of learning (Eshlaghy, Maatofi, & Branch, 2011).

## 2.2. Environmental Turbulence

Environmental turbulence was conceptualized by several researchers (Arnaout & Esposito, 2018; Kiple & Lewis, 2009). Ansoff (1987) is one of the pioneer researchers, who researched environmental turbulence (ET). According to Suddaby (2010), environmental turbulence (ET) is the nonstop changes in the environmental factor that affect the operations and performance of firms. Environmental factors (like regulations, competitive intensity, supplier, market, and technology changes) influenced the firm performance (Uzkurt, Kumar, Kimzan, & Sert, 2018). Environmental turbulence (ET) happens when changes in the environment arise due to shifts in customer demand, modifications in society's values, political situations, changing economics, and the emergence of new technologies (Turulja & Bajgoric, 2019). Because of changes in the external environment, environmental turbulence (ET) works as an obstacle that can be created infirm (Liu, Deng, Wei, Ying, & Tian, 2019). Environmental turbulence consists of three dimensions competitive intensity, technology turbulence, and market turbulence.

## 2.3. SMEs performance

The most important factor of business is performed to prove whether it's profitable or non-profitable (Al-Talib et al., 2016). SMEs' definition is different all around the world, it varies from sector to sector. SMEs' definitions are based on the objective and convenience of the research (Saleem, Siddique, Akmal, Khan, Khan, & Sultan, 2011).

In Pakistan, SMEs consider as paid-up capital of Rs 25 million, annual sales up to Rs 250 million, and no of employees up to 250 (Dar, Ahmed, & Raziq, 2017). Performance can be measured in subjective and objective measures (Schachter, 2010). According to Glaister, Dincer, Tatoglu, Demirbag, and Zaim (2008), subjective measure of

performance has been widely used in empirical research. The financial data of SMEs are not reliable (Kraus, Harms, & Schwarz, 2006). Likewise, SME management is not willing to share their exact financial information due to the unavailability and confidentiality of data (Khan, Khaliq, & Nor, 2014). Along the same line, SMEs in Pakistan are reluctant to share their financial data (Hussain, Shah, Rahman, & Khan, 2018). Therefore, to fulfill the objective of the study, a subjective measure of performance was adopted.

## 2.4. The Influence of Learning Orientation (LO) on SME Performance

LO is a crucial resource needed by small firms to achieve better performance and get a competitive advantage (Ahmadpour Daryani & Karimi, 2018; Nasir, Al Mamun, & Breen, 2017). Mahto et al. (2018) explored that learning orientation enhanced the performance of SMEs. In the same line, Kiyabo and Isaga (2019) argued that learning orientation encouraged SMEs' performance and competitive advantage. Equally, Sawaeen and Ali (2020) indicated that learning orientation has a significant and positive impact on performance. Likewise, learning orientation (LO) improves growth, enhances customer loyalty, leads to new product success, and thereby increases the performance of SMEs (Melton & Hartline, 2013; Pesämaa, Shoham, Wincent, & Ruvio, 2013; Salim & Sulaiman, 2011). However, previous research showed a positive relationship between LO and performance (Kalmuk & Acar, 2015; Nikraftar & Momeni, 2017; Rostinia, Souisab, Masmarulanc, & Yasinc, 2021). While, some studies confirmed no significant relationship between LO and performance (Suliyanto & Rahab, 2012; Wolff, Pett, & Ring, 2015). Following hypotheses have been developed based on previous literature.

**H1:** There is a positive relationship between Learning Orientation and SMEs performance

## 2.5. The moderating effect of environmental turbulence on the relationship between learning orientation and SME performance

Contingency theory specifies the firm's strategy for adaptive resources to respond to the turbulent environment. The performance relationship with respect to learning orientation should be examined in the market environment that is conventionally noted for turbulence and instability (Baker & Sinkula, 1999). Moreover, firm operations strategies operate differently under the varying level of environmental uncertainty.

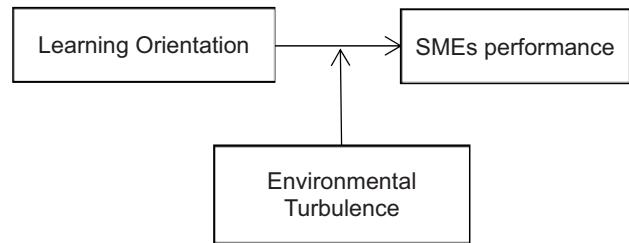
Nowadays, companies' current practices are to enhance competency levels among their members. To adjust to the foremost market conditions, these skills and competencies have been used as a tool to promote developments (Ratnawati, Soetjipto, Murwani, & Wahyono, 2018). According to Calantone, Cavusgil, and Zhao (2002) learning arise mainly through organizational interaction with the observation of the environment. Firms must cope with market and technology turbulence. Along this firm efforts to access new processes and knowledge in the turbulent environment (Pelham & Wilson, 1995; Slater & Narver, 1995). Along with these efforts, they also take initiative in learning for more opportunities (Aragón-Correa & Sharma, 2003; Teece, Pisano, & Shuen, 1997). Similarly, Kalmuk and Acar (2015) indicated that businesses need to have competent personnel to discern and acquire emerging market information and technological developments from the external environment. According to Tajeddini (2016) businesses that are more efficient at introducing, gaining, and disseminating knowledge, and reorientation behavior for new knowledge can respond quickly in turbulent environments. Critical literature showed the inconsistency between LO and the performance of SMEs'. Hence, environmental turbulence (ET) may alter the relationship. Hence the proposed hypothesis is

**H2:** Environmental turbulence (ET) moderates the relationship between learning orientation (LO) and SMEs' Performance.

## 2.6. Research Framework

This study framework establish based on RBV and Contingency theory. According to Barney (1991) strategic orientation(LO) is intangible enterprise resources or assets that can enhance the performance and success of SMEs. It suggested that competitive advantage and superior performance be influenced by resources and capabilities that are perfectly imitable, costly to be copied, and that resources are non-substitutable, rare, and valuable. This study considered learning orientation (LO) as an internal capability. While Contingency theory stated that organizations have no control over the external environment; they must be a proper fit between internal strategies or resources. Thus, this study also used contingency theory to view if the degree of learning orientation may vary based on the external environment that a firm faces at a specific period. Based on critical literature and theories, environmental turbulence is used as moderating variable between learning orientation and

SME performance. Hence, to explain the association among variables following conceptual framework was developed.



**Figure: 1.** Research Framework

## 3. Research Methodology

This research thrust was to check the association between variables. The target population comprised manufacturing (textile) SMEs in Pakistan. To fulfill the study objective, data were collected by using a simple random sampling technique. A total of 379 owners/managers of manufacturing (textile) SMEs were approached based on (Krejcie & Morgan, 1970). To achieve the objective of the study self-administrative questionnaires were designed and distributed using the five-point Likert scale method. The present study employed descriptive and inferential statistics for data analysis. Firstly data was collected, and then it was coded into Statistical Package for Social Sciences (SPSS). In addition, Partial Least Square Structural Equation Modeling (PLS-SEM) was also adopted.

### 3.1. Measurements

To fulfill the objective of the study this research used three main constructs learning orientation, environmental turbulence, and SME performance. LO construct is comprised of three dimensions including shared vision, open-mindedness, and commitment to learning. Besides, the learning orientation scale (LO) has been adapted from the study of (An, Zhao, Cao, Zhang, & Liu, 2018) and developed by (Sinkula et al., 1997). Likewise, the environmental turbulence construct also consists of three dimensions including technology changes, market changes, and competitive intensity. While, environmental turbulence (ET) scale has been adapted from (Alanazi, Talib, Ashari, & Islam, 2015) and developed by (Jaworski & Kohli, 1993). Additionally, SMEs' performance constructs consist of two dimensions comprising financial and non-financial performance. The scale of SMEs' performance has been used (Anwar & Shah, 2021). The response to this nine-item questionnaire used a five-point Likert.

## 4. Results

To test the proposed hypothesis PLS-SEM has been used extensively believed as a modern assessment technique.

### 4.1. Measurement Model Assessment

It highlighted factor loading, cron bach's alpha, composite reliability, and average variance extract of constructs which are used to access the convergent validity.

According to Hair, Anderson, Babin, and Black (2010) factor loading items should be greater than 0.50. Values of factor loading of all items have exceeded the criteria. The Cronbach's alpha values are environmental turbulence (0.944), learning orientation (0.927), and SMEs performance (0.925). Similarly, construct values of average variance extract (AVE) are greater than the recommended values of 0.50. Moreover, composite reliability values are also greater than recommended criteria of 0.70 as shown in the table. 1

**Table 1:** Assessment of Model

Construct	Dimensions	Items	Factor Loading	Cronbach's Alpha	CR	AVE
Environmental Turbulence	Technology Turbulence	TT1	0.768	0.944	0.95	0.526
		TT2	0.751			
		TT3	0.696			
		TT4	0.742			
		TT5	0.71			
		TT6	0.768			
	Market Turbulence	MT1	0.691			
		MT2	0.673			
		MT3	0.698			
		MT4	0.751			
		MT5	0.644			
		MT6	0.767			
	Competitive Intensity	CI1	0.75			
		CI2	0.673			
		CI3	0.713			
CI4		0.75				
CI5		0.804				
CI6		0.735				
Learning Orientation	Open mindedness	OM1	0.738	0.927	0.94	0.636
		OM2	0.847			
		OM3	0.601			
	Shared vision	SV1	0.781			
		SV2	0.817			
		SV3	0.829			
	Commitment to learning	CL1	0.828			
		CL2	0.836			
		CL3	0.867			
SME's Performance	Financial Performance	FP1	0.823	0.925	0.94	0.69
		FP2	0.826			
		FP3	0.844			
		FP4	0.81			
	Non-Financial Performance	NFP1	0.84			
		NFP2	0.815			
		NFP3	0.857			

This study used the HTMT ratio to evaluate the discriminant validity of the construct. Dayan, Heisig, and Matos (2017) defined that the HTMT ratio should be less than 0.90 to ensure discriminant validity. Likewise, all values are less than the recommended value of 0.90. The

discriminant validity value for learning orientation and environmental turbulence was 0.1058. Likewise, for SMEs performance 0.145 with environmental turbulence and 0.825 for learning orientation. Hence, the discriminant validity of all constructs has been found appropriate.

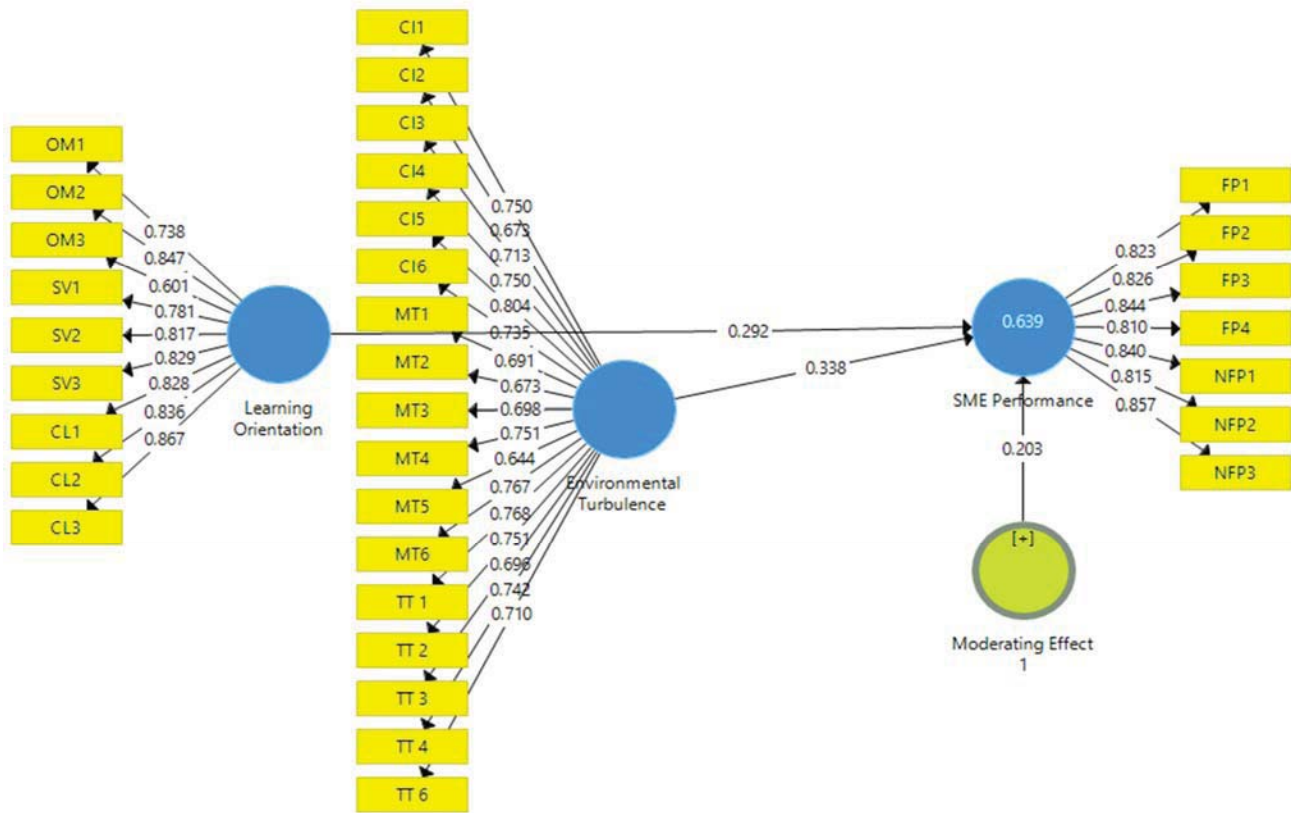


Figure 2. Measurement Model

#### 4.2. Structural Model Assessment

To examine the relationship between the variables structural model assessment has been used. For this purpose, a bootstrapping technique was used to assess the significance of path coefficients. This study's findings showed the significant and positive impact of learning orientation on SMEs' performance (beta = 0.292, p = 0.067, t = 1.858) and supported H1. Additionally, the environmental turbulence (ET) has a significant moderating role between learning orientation (LO) and performance of SMEs (beta = 0.203, p = 0.000, t = 4.347) and is supported by H2 as shown in table 4 below.

Table 2. Results of Path Analysis

	Beta	SD	T.St	P-Value	Decision
Learning Orientation -> SME Performance	0.292	0.157	1.858	0.067	Supported
Moderating Effect 1 -> SME Performance	0.203	0.047	4.347	0.000	Supported

Note: \* significant at 1% , \*\* significant at 5% \*\*\* significant at 10%

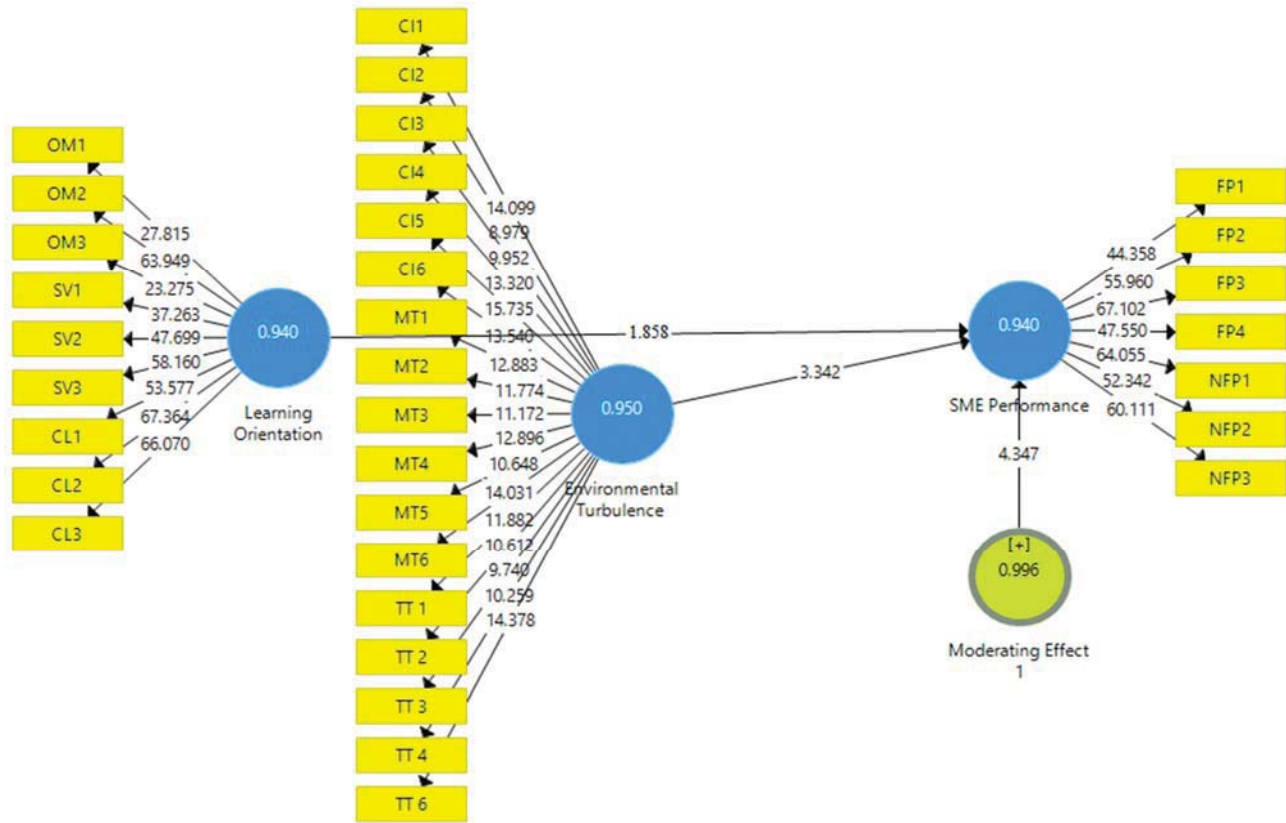


Figure 3. Structural Model

### 5. Discussion of Results

Based on contingency and resource-based view (RBV) theory to assess SMEs' performance. This research aimed to investigate the moderating role of environmental turbulence (ET) between LO on SMEs' performance. The results showed that learning orientation (LO) has a positive and significant impact on SMEs' performance. It approved that learning orientation (LO) is a valuable contribution, and it must be included as an important construct of firm performance. The findings of the study reinforce the previous studies, such as those (Eris & Ozmen, 2012; Frank, Kessler, Mitterer, & Weismeier-Sammer, 2012; Kaya & Patton, 2011; Liu & Fu, 2011; Mavondo, Chimhanzi, & Stewart, 2005; Prieto & Revilla, 2006; Shariff, Ahmad, & Hafeez, 2017; Spicer & Sadler-Smith, 2006).

Moreover, environmental turbulence (ET) moderates the association between LO and SME performance. Consequently, this research argued that in a turbulent competitive environment, SMEs with a high level of LO capability has been shown to have greater performance as compared to those who have a low level of LO. Because of

environmental changes, firms adopt learning orientation practices to meet the customer's changes and to develop new products. To respond to the turbulent environment, firms accept new ideas, skills, and processes. The results are acknowledged by previous studies conducted in a different context such as (Hanvanich, Sivakumar, & Hult, 2006; Hina, Hassan, Parveen, & Arooj, 2021).

### 6. Conclusion

The resource-based theory advocates that firms can improve their performance and get a competitive advantage. This paper notifies thinking in this field and provides guidelines to improve learning strategy formulation to support the distribution process of SMEs. Firms employed a strategy based on resources like capabilities, knowledge, and process (Barney, 1991). While contingency theory is supported by environmental turbulence. Based on the above theories, analysis has been conducted and concluded that learning orientation (LO) significantly affects SMEs' performance. Additionally, environmental turbulence (ET)

moderates the relationship. Thus, learning orientation (open-mindedness, shared vision, commitment to learning) can ensure survival and create a competitive advantage. Previous studies only focused on the direct relationship between LO and SMEs' performance in other countries. While this study explored the relationship through moderating variable environmental turbulence (ET) in the developing country Pakistan. These research findings inform that the contingency and resource-based view are suitable to get a competitive advantage by focusing on intangible resources such as learning orientation and anticipating environmental turbulence. This research provided an insight into the strategic behavior of manufacturing SMEs to give serious attention to learning practices to ensure the highest performance and can improve its distribution management process. Manufacturing SMEs should foster the courage to enhance competency levels for opportunity seeking. They should strengthen their commitment to learning by motivating and encouraging them to learn more about technological changes, competitors, and market changes. They should also share their vision at all levels and need to place a high value on openness.

The findings suggested that SME owners/managers should embrace learning orientation to enhance performance. Due to environmental turbulence (technology, market changes, and competitive intensity), a firm needs to formalize strategies accordingly. Therefore, this study suggested that SME management needs to focus on learning to adapt the external changes for survival and growth. SMEs' survival will be determined first by their abilities directly related to distribution management. The key to this is the effective implementation of learning orientation. Moreover, manufacturers of textile products can get a deeper, more learning about the particular market and operating within. Therefore, they would be capable to evaluate, formulate and implement their distribution channel strategy more effectively and efficiently. SMEs management can utilize the study results to strategize, effectively and efficiently business operations by addressing issues related to relating to inventory, transportation, information and communication, and transportation. Additionally, they need to learn more because of environmental turbulence. The performance of manufacturing firms can be improved through more integrated distribution management if management embodies flexibility and learning capabilities in their operations and become learning-oriented.

This study suggested that learning should become a norm for everyone, particularly concerning product innovation, strategy, and sharing new knowledge. It also argued that if firms stop learning, it would badly affect their process of producing and delivering products. because they cannot absorb the external pressure. It is also recommended to

researchers for further validation because the relationship was not extensively addressed in SMEs. The manufacturing (textile) SMEs of Pakistan can improve their learning process if they heighten their work practices by encouraging open-mindedness, commitment to learning, and shared vision. SMEs may improve their process of distribution management including manufacturing, wholesaling & retailing management by learning orientation.

## 7. Limitations and Future Research Directions

This study presented a novel framework by comprising environmental turbulence (ET) as a moderation variable and learning orientation (LO) as an internal firm resource that creates a competitive edge for SMEs in the manufacturing sector of Pakistan. This study's limitation emerged some future directions. Firm performance was measured by using the subjective method because the researcher found it challenging to get objective data. In the future, researchers may conduct the study by utilization of objective measures of performance. The generalizability of results is limited to only one textile sector; it may prove to carry out in other trading, services, or a comparative study. Finally, there may be other factors that intervene or direct the relationship between learning orientation (LO) and SME performance.

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