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Learning Organizational Culture and its Impact on Organizational Resilience in SMEs

TALHA ZUBAIR AHMAD KHAN [1], WAQAS FAROOQ [2] *

[1] University of Management and Technology, Lahore, Pakistan

[2] University of the Punjab, Lahore, Pakistan

Abstract: The emergence of COVID-19 pandemic have challenged the resilience of SMEs (Small Medium Enterprises) in Pakistan. SMEs can no longer rely on the traditional methods to ensure their survivability in turbulent environmental conditions. Building on the foundations of dynamic capabilities view, this study proposes that learning organizational culture provides the required supportive mechanisms, structures and processes needed for sustaining organizational resilience. The hypothesis is tested using data of 295 self-administered questionnaires from middle to top-level managers of SMEs in Pakistan. Empirical evidence from this study indicates that learning organizational culture positively influences the organizational resilience of SMEs. Additionally, this study also provide empirical support to a two-factor process model of organizational resilience. Findings of this study provides a step ahead in understanding of organizational resilience by shifting the theoretical lens from 'resilience response' to 'resilience potential' approach. In addition to examining the role of learning organizational culture in developing organizational resilience in SMEs, this study suggests that managerial interventions in SMEs should incorporate a sense of resiliency not only at operational level but also within its strategic orientation.

Keywords: Organizational resilience, Learning organizational Culture, Resource-based view, Dynamic capabilities perspective, Small medium enterprise

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INTRODUCTION

Organizations are the key drivers of economic prosperity; they are responsible for producing services and goods, generating employment, fostering innovation in products and services, and creating social bonds within the community. However, the dynamic nature of the contemporary business environment has presented unique internal and external challenges for the organizations that are usually not apparent and can become crises if ignored entirely. These challenges are turbulent, and it is difficult to detect them, let alone to fully understand their potential impact on the organization's ability to operate. For organizations, specifically small and medium-sized enterprises (SMEs), coping up with such challenges is of utmost importance while remaining in a state of denial or underestimating the impact of threats and missed opportunities may lead to a cascade of failures (Smith, 1990).

Interestingly, research has shown that SMEs respond heterogeneously to external challenges, specifically during the COVID-19 pandemic (Klyver & Nielsen, 2021). Although retrenchment has been commonly followed by SMEs as a response to COVID-19, for some, however, the response has been innovation and change. Klyver and Nielsen (2021) emphasized that the success or failure of an SME following an external crisis (COVID-19 pandemic) depends on how SMEs react to the crisis. The significance of this study is associated with the exploration of strategic capabilities that can be deployed by SMEs to develop resilience potential within turbulent environmental conditions.

However, literature has been mainly focused on explaining the phenomenon itself. It is critically argued that studying organizational resilience without understanding how organizations are 'organized' and how contextual factors may support it provides a marginal solution towards developing a holistic model of organizational resilience

*Corresponding author: WAQAS FAROOQ
†Email: waqasfaroq@gmail.com

(Linnenluecke, 2013; Khan, Farooq, & Rasheed, 2019). Context, in this sense, incorporates the cultural dimensions of the organizations (Newman, 1971; Kim & Lee, 2006) that may have dramatic consequences towards organizational resilience because they support the complex processes associated with building organizational resilience capabilities (Doerfel & Prezelj, 2017). In other words, there is a need to understand the nature and relationship of cultural mechanisms that may affect the resilience capability of SMEs to cope up with these external and internal complexifications (Wokutch, Singal, Gerde, & Naar, 2016).

However, research studying resilience at an organizational level is at its initial stages, and scholarly efforts studying organizational resilience construct and its respective dimensions have remained in the form of a 'black box' (Linnenluecke, 2013; Duchek, 2014). More specifically, studies contributing towards the theme of organizational resilience have offered limited insights, lacks consensus, and are predominantly conceptual about the nature and distribution of required organizational resources and capabilities necessary towards dealing with environmental uncertainties (Khan et al., 2019; Turner & Kutsch, 2016; Linnenluecke, 2017; Ma, Xiao, & Yin, 2018; Barasa, Mbau, & Gilson, 2018). Similarly, research studying the relationship between organizational resilience and its enabling cultural conditions has received relatively less attention and remained mixed in its explanations (Williams, Gruber, Sutcliffe, Shepherd, & Zhao, 2017; Doerfel & Prezelj, 2017).

Research Objectives

The objectives of this study are twofold. The first objective of this study is to validate the constructs of learning organizational culture and organizational resilience. The second objective of this study is to investigate the impact of learning organizational culture on organizational resilience.

Keeping in view this paper is organized in the following manner. The first section provides a literature review on organizational resilience and establishes the theoretical link between learning organizational culture and organizational resilience. The second section elaborates on the research methodology. The third section provides the findings, and the last section provides the conclusion.

LITERATURE REVIEW

Defining Organizational Resilience

Central to the theme of organizational resilience is its conceptualization as a form of dynamic organizational capability. Advocates of the resource-based view (RBV) have attributed the success of organizations in gaining a competitive advantage through building valuable, rare, inimitable, and non-substitutable resources (Barney, 1986a, 1986b, 2001). Similarly, followers of knowledge-based view (KBV) have signified the contribution of knowledge creation in organizational success (Grant, 1996; Nonaka & Toyama, 2003). On the other hand, Porter (1987) shed light on the importance of a firm's unique strategy that emerges in the face of adversity as a source of its competitive advantage. It is important to note that highlighting these different views is not to start a debate but acknowledge the level of diversity employed throughout the years towards addressing this issue.

However, unexpected and adverse events don't occur instantaneously. Their symptoms are evident in the form of small unfavorable events which escalate until it becomes very difficult for the organization to handle (Sutcliffe, 2006). Under such circumstances where organizational systems are subject to turbulent environmental conditions (Boyne & Meier, 2009), they are required to readjust in the face of every variation regardless of its magnitude. In other words, the challenge is not to find the solution to every problem that organizations face under uncertain environmental conditions, but actually to develop such form of capabilities that enable them to act preemptively and continue to do so by incorporating new knowledge towards is routines and activities (Burnard & Bhamra, 2011). However, dynamic environmental conditions post challenges for the organizations, which should not be underestimated. The nature of such problems is a diverse, variant, and most importantly, unpredictable to anticipate. For instance, Sheffi and Rice Jr (2005) characterized such forms of events as having high impact and low probability, such as natural disasters, fluctuating market conditions, policy changes leading to regulatory actions, ever-changing customers' needs. It is important to note that events having a low impact on organizational systems should also be considered important. In this sense, organizations are viewed as dynamic and complex systems composed of sequences of social events (Abbott, 1990). Here, complexity is defined as the number of events at any point in time that should be addressed by the organizations to sustain a competitive advantage.

However, Anderson (1999) argued that complex organizational systems are characterized by related events

that are difficult to be analyzed through a reductionist approach. Several feedback loops exist within the systems, which tends to change the property of the systems in a non-deterministic way. Furthermore, complex organizational systems are highly sensitive to small disturbances within their initial conditions and tend to completely change their property relative to other systems prone to similar disturbances. It doesn't mean that behaviors of complex organizational systems under study are characterized by complete randomness. Although, certain dynamic systems process which appears to be completely random might be chaotic and behave in a deterministic way (Koput, 1997). In short, organizational systems characterized as chaotic tend to reconcile in the face of adversity and reach a state where they can overcome the underlying problem. Teece, Pisano, and Shuen (1997) refer to such a form of ability as the "dynamic capability" of an organization embedded in its distinctive process shaped by its current asset positions and path dependencies. Teece et al. (1997) highlight organizational capabilities that allow organizations to address anomalies in rapidly changing environments. According to him, an organization's capabilities and competencies fundamentally rest in its processes shaped by its current asset positions and concurrent to its evolutionary paths. Such processes are conceptualized as high-performance routines (Pisano & Teece, 1994).

Generally, the resilient capacity is understood as a tool comprised of organizational routines categorized as managing an organization's keystone vulnerabilities, developing adaptability, and situational awareness within the organization's system (McManus, Seville, Vargo, & Brunsdon, 2008). Therefore, organizations have to develop higher-order capabilities to sustain organizational growth (Danneels, 2016). Koronis and Ponis (2018) noted that organizational growth and survivability are more dependent on its strategic characteristics rather than managerial ability to handle disruptive situations or crises. In addition, Wildavsky (1988) conceptualized organizational resilience as a dynamic capacity of organizations to adapt and grow over some time. While Zahra and George (2002) conceptualize such routines and processes by which organizations acquire, assimilate, transform and exploit knowledge to produce dynamic organizational processes. Understanding organizational resilience as a form of dynamic organizational capability deepens theoretical understanding in the following ways; First, dynamic capabilities view and organizational resilience commonly emphasize developing organizational persistence under dynamic conditions. Persistence refers to competitive advantage for the former (Teece, 2007) and survivability for the letter (Yang & Smyrnios, 2018). Similarly, dynamism refers to threats and opportunities that arise in the business environment for the former (Eisenhardt & Martin, 2000) and potential for the crisis due to rising threats or missed opportunities for the letter (Lee, Vargo, & Seville, 2013). The integration of both concepts provides a dynamic view of organizational resilience.

Second, the capabilities-based view emphasizes the need for understanding organizational resilience as a part of strategic organizational orientation. Here, utilizing organizational reliable and high-performance routines serves as a source of competitive advantage. These high-performance routines are composed of actions to create, extend, and reconfigure existing organizational resources to minimize the impact of external threats or gain market opportunities (Ambrosini & Bowman, 2009).

Third, capability-based interpretation of organizational resilience signifies the notion of reliable and repeatable action into its conceptualization, beyond simple phases of evolution and revolution addressing various types and concatenation of crises resulting in organizational growth as a function of the size and maturity of the firm. In other words, resilience capability is not simply an option that may be nice to have under uncertain circumstances, but rather an essential quality to be developed for a firm to realize competitive advantage through good, strategically coherent, and resource sufficient times, along with the challenges accompanying adverse conditions of strategic and resource collapse (Manfield & Newey, 2015).

Fourth, the dynamic view of organizational resilience represents a detachment from the static view of resources dependencies theories towards a progressive view of strategic change resulting from resource reconfiguration capabilities given the dynamism premise (Eisenhardt & Martin, 2000). Notably, organizational resources are essential towards survival (Xie et al., 2018). However, their mere possession is not enough when the complexifications within internal and external environmental conditions put pressure on them to change, integrate, and, evolve (Schilke, Hu, & Helfat, 2018).

Finally, and perhaps more importantly, the dynamic capabilities view signifies the role of knowledge-based resources, a kind of intangible resources that can be acquired, modified, and integrated into a combination of other tangible assets (Zahra & George, 2002). While organizational resilience scholarship has emphasized learning and feedback, integrating the dynamic capabilities concept set forth the mechanisms, processes, and routines of

organizational learning required to bring this change.

Key similarities between various definitions of dynamic organizational capabilities have been on the ability of organizations to build, integrate, and reconfigure competencies (Døving & Gooderham, 2008) strategic routines that comprise of integration, reconfiguration, and gain and release (building) to make a strategic-environmental fit (Eisenhardt & Martin, 2000), a capability to create (build), extend (integrate), and modify (reconfigure) its resources (Winter, 2003; Maatman, Bondarouk, & Looise, 2010), a learnable capability of organizations that generates (build, integrate) and modifies (reconfigure) routines to achieve effectiveness(Arend, 2014).

Li and Liu (2014) explained that dynamic capabilities are composed of three key organizational capacities, namely 'Strategic sense-making capacity, Timely decision-making, and Change implementation capacity'. Strategic sense-making capacity is defined as a resilience capacity of organizations to detect and interpret change within internal and external business environments to sense both opportunities as well as potential threats. At the same time, timely decision-making is defined as timely decision to deploy organizational resources following the shifting environmental needs. Finally, change implementation capacity is defined as the capacity of organizations to coordinate strategic decisions and implement appropriate change in their strategy. Therefore, this paper adopts Li and Liu (2014) conceptualization of dynamic capabilities perspective in defining organizational resilience.

Organization's Learning Culture and Organizational Resilience

An organizational ability to recognize and assimilate valuable knowledge in the first place is associated with building a culture of learning into its day-to-day operations. Logically speaking, organizations can't indulge in knowledge exploration and exploitation strategies until they build sufficient learning capability in the first place.

Chiva and Alegre (2009) explained that organizational learning is associated with the organization's level of experimentation, level of risk-taking, and its level of interaction with the external environment. According to them, organizational learning capability and organizational learning phenomenon are distinctive concepts, the former deals with the processes that facilities the organizational learning processes or provide the nurturing conditions for organizational learning to happen while later highlights the process of learning itself comprised of knowledge-intensive tasks of information acquisition and sharing within the firm.

As highlighted earlier, organizational learning processes necessarily entail sensing, building, and creating knowledge assets for the organizations. However, a learning organization sets foundations, values, and necessary conditions that enable the organization's learning processes to occur. Academic scholarship distinguishes Organizational Learning and Learning Organizations by their relative focus on learning processes and structures. The term 'organizational learning' focuses on process, a sequence of activities an organization undertakes to learn, build, and develop knowledge-based resources. However, "learning organization" emphasizes on the unique structural characteristics of an organization that facilitates the learning processes. For this reason, a learning organization highlights the structural components that define a learning environment rather process that it carries to develop knowledge-based assets.

The key assumption of the multifaceted nature of organizational learning culture at the individual, team, and organizational key levels of analysis. For example, Marsick and Watkins (2003) argued that organizational learning culture is composed of several organizational contextual and individual/team-related factors that facilitate organizational learning processes. In addition, Yang and Smyrnios (2018) noted that learning organizations effectively integrate the people and structure to facilitate learning. Key descriptions related to organizational learning cultural dimensions are presented in Table 1.

Table 1: Integrative learning organizational culture

Dimension of Learning Organization Culture	Descriptions
Continuous Learning (Contextual Dimension)	Learning Opportunities are provided to organizational employees on a regular basis, and learning opportunities are readily available.
Injury and Dialogue (Individual/Team Dimension)	Organizational culture supports feedback, experimentation, and dialogue. At the same time, employees gain productive reasoning skills and possess the capacity to accept knowledge and feedback.
Encourage Team Learning (Individual/Team Dimension)	Teamwork, collaboration, and diversity are encouraged towards problem-solving and decision making.
People Empowerment (Individual/Team Dimension)	Employees are part of the decision-making process, while responsibility is distributed.
Embedded System (Contextual Dimension)	Necessary technological support is in place to facilitate learning processes while learning is shared and integrated with work routines.
System Connection (Contextual Dimension)	The organization is connected with its employees
Strategic Leadership (Individual/Team Dimension)	Leadership supports/facilitates/encourages learning processes within an organization and uses learning for strategic decision-making.

Stephenson (2010) defines resilience ethos as a form of supportive organizational culture that is embedded and within the organization at all hierarchical levels attributed by an ever-increasing commitment of organizational members towards increasing resilient based processes and belief in the inherent fallibility of the system while promotes a network perspective within its systems. This view is also consistent with Vogus and Sutcliffe (2007) emotional underpinnings of organizational resilience. The importance of such forms of supporting culture has also been emphasized briefly within the dynamic capabilities domain. Vogus and Sutcliffe (2007) highlights important contextual dimensions necessary to build dynamic capabilities within organizations. According to them, the autonomy (self-direction and management) which refers to the level of freedom in making independent decisions within the organization, is positively associated with building and sustaining dynamic capabilities (comprised of knowledge-intensive tasks) within the organizations.

Therefore, learning organizational culture is considered as the nurturing environment which promotes the processes of organizational learning (Loermans, 2002). Since organizational resilience incorporates learning processes such as knowledge acquisition and dissemination within the process of situational awareness and application within the process of adaptive capacity, this thesis recognizes the value of facilitating factors that nurture such a form of the learning process. Thus, organizational learning culture is proposed as an antecedent to the knowledge-intensive tasks of the organizational resilience process and a necessity to build and sustain both the processes of static and dynamic resilience. Teece et al. (1997) also emphasized that decentralized organizational structures having a greater form of local autonomy ease the flow of information across the hierarchical structure (top-down and bottom-up) of the organizations and give organizations the ability to be aware of technological changes within its external and internal environment. Lengnick-Hall, Beck, and Lengnick-Hall (2011) also refers to this as diffuse power and accountability domain element of contextual level elements that support resilience structures within organizations.

Prieto, Revilla, and Rodríguez-Prado (2009) further emphasized the role of supportive culture that puts interest

in the welfare dimension of organizational members to create a positive working environment that facilitates knowledge-intensive tasks. Similarly, Lengnick-Hall et al. (2011) highlighted the importance of maintaining a climate of psychological safety in organizations that allow its members to take risks, experiment, provide critical feedback, and can easily acquire constructive feedback from others.

As discussed earlier, organizational leadership plays an important part in ensuring a system of organizational management is resilient. However, it is important to note that leadership effectively motivates people in the organization to bring about the required change in an individual and comprising social systems. Besuner (2017) emphasized that role of leadership is particularly important when pressing organizational issues and stiff environmental conditions are present. Since organizational resilience entails the dynamic processes of such nature, leadership becomes vital towards promoting resilience-based activities, innovation, and unique ways of problem-solving and entails continuous resilience as a core feature of managerial cognition (Kor & Mesko, 2013). Teece (2007) pictured the role of top leadership as a sustaining agent to dynamic capabilities. According to him, centralized governing structures within the organizations create connectivity disjoints between the top management and the ground realities. These rigidities create knowledge gaps and slow down the response rate to potential opportunities or threats.

It is important to note that leadership theories tend to explain the leadership behavior and interpersonal aspects. However, strategic leadership is concerned with the management of the overall organization and entails substantive decision-making responsibilities which move beyond the relational and interpersonal aspects that are usually associated with leadership. For instance, Barron, Henderson, and Newman (1995) explained the role of leadership in bringing change within organizations through creating and communicating vision and influencing behavioral outcomes.

Here, Adobor, Darbi, and Damoah (2021) presented the conceptual underpinnings of strategic leadership. According to them, high-impact events demand the top management to offer strategic leadership that focuses on developing organizational capabilities tuned towards the necessities of the organization's external environmental change. Therefore, strategic leadership is considered a form of contextual resource that can be deployed as part of overall learning culture that facilitates learning processes, decision-making, and implementing change.

H1: Dimensions of Learning Organizations Culture (DLOQ) positively influences Organizational Internal Trust (IT)

RESEARCH METHODOLOGY

Sekaran and Bougie (2019) argued that conducting purely scientific investigations within the domain of management and behavioral areas are always not possible. They further argued that, unlike in the case of physical sciences, manipulation of contextual factors is marginalized. Moreover, Johnson (2001) argued that much of quantitative research in the social/behavioral sciences domain tends to be nonexperimental, mainly due to the non-manipulative nature of the social phenomenon that limits the ability to control for the variables involved in the study.

Therefore, this paper uses a survey design since they do not involve the treatment or control for associated variables in the study. However, it is important to note that one limitation to using survey designs is associated with the robustness of studying dependency models. Large survey designs are data-driven. The use of a large sample size can work as a substitute rather than an alternative to experimental research (Creswell, 2002).

Sampling

Sampling decisions are comprised of three important aspects. These are decisions regarding the unit of analysis, sampling strategy, and sample size. This study incorporates 'knowledge workers' as a unit of analysis that are involved in knowledge-intensive tasks. They are comprised of SMEs managers at middle to top-level hierarchical positions having a minimum of bachelor's degree. Here, knowledge workers are selected as proxy representatives of their organizations since they are responsible for the strategic maneuverability of their respective organizations in the face of environmental turbulence. Their selection as participants of the study should provide a more reliable view of strategic processes about organizational resilience (Papadakis & Barwise, 2002).

Second, Purposive sampling has been utilized as the sampling strategy. Tongco (2007) highlighted that purposive sampling is most effective when there is a need to study experts within a certain contextual domain. Research has

shown that the method stays robust even when tested against random probability sampling techniques. Finally, VanVoorhis, Morgan, et al. (2007) have argued that for conducting factor analysis calculations sample size of 300 participants is considered 'good.' Therefore, 500 self-administered questionnaires were sent to the respondents, out of which 295 responses have been received. The low response rate is associated with the traveling restrictions and closure of businesses aimed COVID-19 pandemic situation.

DATA COLLECTION METHOD

Organizational capacities such as learning culture are latent and define the contextual characteristics of organizations (Schoorman, Mayer, & Davis, 2007) embedded within culture, values, and norms that develop over time. Keeping this in view closed-ended questionnaire data collection method has been used for the study.

DATA ANALYSIS AND RESULTS

Addressing the Issues of Validity, Reliability and Model Fit

This section addresses the issues associated with the validity and reliability of organizational resilience and learning organizational culture constructs. This section attempts to identify the current issues related to model fit, validity, and reliability and then recommend appropriate changes. These steps are necessary before estimating path dependency between these variables in the study. An exploratory factor analysis followed by confirmatory factor analysis has been performed for both variables and discussed in the subsequent sections. Table 2 highlights the benchmark threshold before conducting the model fit analysis.

Table 2: Recommended values for model fit

Index	Threshold	Reference
CMIN/df (Absolute fit indices)	From >2 to <5	(Wheaton et al., 1977)
GFI (Absolute fit indices)	Cutoff 0.9 or above Contains bias concerning sample size	(Jöreskog and Sörbom, 1988)
CFI(Incremental fit indices)	Cutoff 0.9 or above	(Hu and Bentler, 1999)
RMESA (Absolute fir indices)	.05 to 0.10 (Fair fit) .08 to .10 (Mdeicore fit) Close to .06 to .07 (Perfect fit)	(MacCallum et al. 1996) (Hu and Bentler, 1999) (Steiger, 2007)

Addressing the validity, reliability, and model-fit for Dimensions of Learning Organizations Culture (DLOQ)

Exploratory factor analysis has been performed for DLOQ construct after eliminating two of its components called 'Empowerment' and 'Continuous learning,' and a five-factor solution has been extracted with strong factor loadings in respective dimensions, model fit indices conformity, and no validity issues. Table 3 highlights the rotated component matrix (exploratory factor analysis) results with no factor loadings less than 0.5 threshold.

Table 3: Revised exploratory factor analysis for DLOQ after eliminating cross factor and weak factor loadings

	Extracted Components				
	Strategic Leadership	Team Learning	Embedded System	System Connection	Inquiry and Dialogue
Provide Opportunities to Learn (SL2)	.778				
Provide Mentoring/Coaching (SL1)	.777				
Ensure the Consistent Actions (SL3)	.663				
Measure the Results of Training (ES3)		.835			
Create Measurement System (ES1)		.704			
Make its Lessons Learned Available (ES2)		.653			
Act on Our Recommendations (TL3)			.760		
Revise Thinking with Information (TL2)			.751		
Have Freedom to Adapt Goals (TL1)			.531		
Work with Outside/Resources (SC2)				.791	
Encourage Global Perspectives (SC1)				.712	
Encourage Diverse Perspectives (SC3)				.633	
Take Time to Support Learning (ID2)					.850
Help Each Other Learn (ID3)					.615
Being Rewarded for Learning (ID1)					.543

Followed by exploratory factor analysis, confirmatory Factor analysis has been performed for DLOQ construct after the elimination of two of its components called 'Empowerment' and 'Continuous Learning,' and a five-factor solution has been extracted with strong factor loadings in respective dimensions, model fit indices conformity, and no validity issues. Figure 1 highlights the model fit indices of the DLOQ construct after eliminating Cross Factor and Weak Factor Loadings following a confirmatory factor analysis.

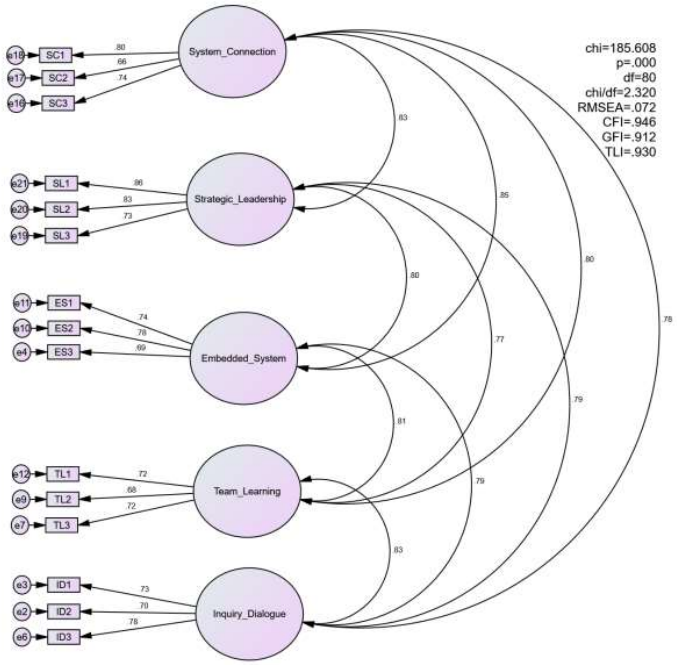

Figure 1: Confirmatory factor analysis of revised 'dimension of learning organizational culture' (DLOQ) construct

Confirmatory factor analysis shows that model fit indices are within the acceptable ranges while none of the constructs exceed a correlation above 0.9. Two dimensions, namely continuous learning and empowerment, have been eliminated due to weak factor loadings. A total of seven iterations for confirmatory factor analysis have been performed that show a 5-factor solution for dimensions of learning organizational culture as the optimal model. Any increase beyond the 5-factor solution results in mere improvement within the model fit indices as shown in Table 4.

Table 4: Seven factor solutions and associated model fit indices for DLOQ

	Chi-Square (Chi)	Degrees of Freedom (Df)	Chi/Df	RMSEA	CFI	GFI
1-Factor Solution	562	150	3.7	0.097	0.85	0.837
2-Factor Solution	456	149	3.06	0.084	0.888	0.858
3-Factor Solution	456	149	3.06	0.084	0.888	0.858
5-Factor Solution	367	142	2.5	0.074	0.92	0.89
6-Factor Solution	335	137	2.4	0.07	0.928	0.895
7-Factor Solution	279	131	2.1	0.062	0.946	0.91

Table 5 highlights the validity and reliability associated with the measurement model of DLOQ.

Table 5: Validity and reliability of DLOQ construct

Construct	CR (Composite Reliability)	AVE (Average Variance Extracted)	ASV (Average Shared Variance)
Team_Learning	0.752	0.503	0.481
System_Connection	0.776	0.538	0.526
Embedded_System	0.782	0.545	0.526
Inquiry_Dialogue	0.782	0.545	0.481
Strategic_Leadership	0.849	0.653	0.486

Constructs in the DLOQ measurement model reports AVE (Average Variance Extracted) above the minimum

cut-ff threshold of 0.5. While for discriminant validity, the individual construct's AVE (Average Variance Extracted) is above the ASV (Average Shared Variance) within the model. Hair, Ringle, and Sarstedt (2011) highlighted that the acceptable value of CR is 0.7 and above while AVE should be greater than a minimum threshold of 0.5 for achieving construct validity.

Addressing the validity, reliability, and model-fit for Organizational Resilience (OR) construct

Exploratory factor analysis using rotated component matrix of organizational resilience construct revealed several inconsistencies in cross-factor loadings and a low score on extracted factors. Sense-making capacity showed less tendency towards cross-factor loadings. However, timely-decision making and change implementation capacity, mostly loaded together, indicating the possibility of a two-factor construct instead of three. Two-factor solution showed strong factor loadings in their respective dimensions, model fit, and no validity issues. Table 6 highlights the rotated component matrix (exploratory factor analysis) results with no factor loadings less than .5 threshold.

Table 6: Validity and reliability of DLOQ construct

	Extracted Components	
	1	2
Can Fully Understand the Impact of Internal And External Environment (SMC3)	.842	
Often Have Meetings to Discuss The Market Demand (SMC2)	.836	
Perceive Environmental Change Before Competitors (SMC1)	.832	
Can Feel the Major Potential Opportunities and Threats (SMC4)	.780	
Have a Proper Awarding And Controlling System (CMC4)		.936
Can Make Timely Decisions to Deal With Strategic Problems (TDC2)		.710
We Help Each Other in Strategic Change Implementation (CMC3)		.694
Can Quickly Deal with Conflicts in the Strategic Decision-Making Process (TDC1)		.615

Followed by exploratory factor analysis, confirmatory Factor analysis has been performed for organizational resilience construct based on the findings from exploratory factor analysis which shows strong factor loadings in respective dimensions, model fit indices conformity and no validity issues. Figure 2 highlights the model fit indices of organizational resilience.

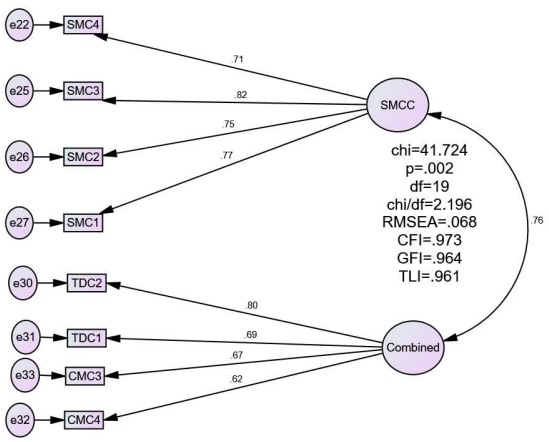

Figure 2: Confirmatory factor analysis of revised organizational resilience construct

Confirmatory factor analysis shows that model fit indices are within the acceptable ranges while none of the constructs exceed a correlation above 0.9. It can be seen that although the items of sense-making capability

effectively load together into its construct, however, the other two constructs, namely timely decision making and change implementation capacity, load together into a new construct. For simplicity, this construct has been named 'combined,' and its theoretical implications have been extensively discussed in the findings section. Table 7 highlights the validity and reliability associated with the measurement model of organizational resilience.

Table 7: Validity and reliability of DLOQ construct

Construct	CR (Composite Reliability)	AVE (Average Variance Extracted)	ASV (Average Shared Variance)
SMCC	0.848	0.538	0.333
Combined	0.790	0.487	0.333

The AVE of the SMCC construct meets the minimum cutoff criteria of .05. On the other hand, the combined construct doesn't meet this criterion with an AVE value of 0.487. However, Fornell and Larcker (1981) argued that if the composite reliability of the construct is above 0.06, a cutoff criterion of AVE above 0.04 is acceptable, and convergent validity of the construct should be considered adequate.

This section proceeds towards estimating direct effects. Figure 3 highlights the structural model estimation investigating the effect of learning organizational culture on organizational resilience.

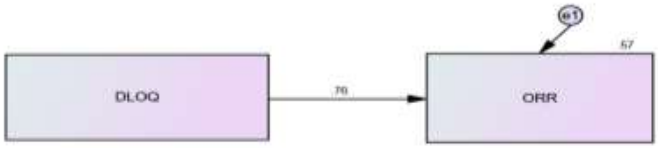

Figure 3: Structural model estimation

It is evident that Learning Organizations Culture (DLOQ) positively influences Organizational Resilience (ORR). Furthermore, the R-square value of the outcome variable (Organizational Resilience) shows that more than 50% of the variance in organizational resilience has been explained by learning organizational culture, which is in the acceptable threshold of the goodness of fit of the regressed model. This finding is summarized in Table 8.

Table 8: Direct effect size in structural model estimation

Hypotheses	Abbreviation	*p*-Value	Direct Effects (B)
H: Learning Organizations Culture (DLOQ) positively influences Organizational Resilience (ORR)	DLOQ ORR	Significant (<.001)	0.76

DISCUSSION

This study provides a step ahead in theoretical understanding by shifting the lens from 'resilience response' to 'resilience potential' approach by conceptualizing organizational resilience as a dynamic capability rather than a mere response strategy to crises. This stream of research has not yet been fully explored (Linnenluecke, 2017). Here, this study contributes in two distinctive ways, first, by identifying the antecedents to the dynamic capability of organizational resilience. Second, validating the construct of learning organizational culture and organizational resilience. As discussed in the literature review section, the scholarly effort has remained fragmented to explain the drivers of organizational resilience, mainly due to the outstanding efforts within multiple research domains. Results from this study have shown that organizational resilience antecedent, namely learning organization culture' positively supports (significant relationship) towards building organizational resilience in SMEs. Findings from

this study are contrary to the traditional three-factor construct of dynamic capabilities that have been discussed in various studies (Li & Liu, 2014). Strategic sense-making capacity of organizations, seems to be consistent in light of previously discussed literature. However, results have shown that the other two hypothesized dimensions of organizational resilience, namely, timely decision-making capacity and change implementation capacity are better explained in a single factor.

CONCLUSION AND LIMITATIONS

Organizational resilience is a higher-order organizational capability (Dynamic capability) manifested within knowledge-intensive routines of sensing and adaptability. Development of such capabilities is supported by an organization's learning culture. The dynamic capabilities view provides a solid foundation towards understanding how organizations emerge resilient under challenging times. This notion is based on three core findings that emerge from this study. In practice, the nature of SMEs makes them more flexible in developing such forms of dynamic capabilities, mainly because they usually do not possess slack financial resources and because they invest relatively high in knowledge-based resources. It is important to note that resilience potential refers to the continuous and repetitive nature of resilience routines performed within an organization to sense changes and adapt even if it requires small changes within its business model. Limitations of this study are twofold. Lack of sectorial differences within SMEs and use of cross-sectional study design in data collection and sampling processes limits the generalizability of findings over the large set of population. These limitations are associated with the dramatic increase in the travelling costs and lockdown situation within the country during data collection processes aimed COVID-19 pandemic.

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