



E-ISSN: 3108-4176

APSSHs

Academic Publications of Social Sciences and Humanities Studies

2021, Volume 2, Page No: 95-105

Available online at: <https://apssh.com/>

## Annals of Organizational Culture, Leadership and External Engagement Journal

# Crisis Strategies in the COVID-19 Era: Interplay of Organizational Culture, Strategic Orientation, and Mediation in Jordanian Private Universities

Jonas Berg<sup>1\*</sup>, Emma Lind<sup>1</sup>, Karl Olsson<sup>1</sup>

1. Department of Organizational Psychology, School of Management, Lund University, Lund, Sweden.

### Abstract

This paper investigates how crisis response practices during the COVID-19 pandemic, organizational strategies, and organizational culture interact within private universities in Jordan. A total of 384 electronic surveys were sent to academic staff involved in administration—such as department chairs and faculty deans—of which 250 were completed and returned. The research utilized the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach for data analysis. Findings indicated that strategic orientation within organizations was negatively linked to crisis response strategies related to the COVID-19 situation. Conversely, results demonstrated a strong positive connection between strategic orientation and organizational culture. The study further confirmed that culture exerts a significant impact on crisis management behavior in private universities and acts as a mediator between strategic orientation and crisis response mechanisms.

**Keywords:** Crisis response strategy, Organizational culture, Strategic orientation, PLS-SEM

**How to cite this article:** Berg J, Lind E, Olsson K. Crisis Strategies in the COVID-19 Era: Interplay of Organizational Culture, Strategic Orientation, and Mediation in Jordanian Private Universities. *Ann Organ Cult Leadersh Extern Engagem J.* 2021;2:95-105. <https://doi.org/10.51847/3kB2YxyvC>

**Received:** 26 January 2021; **Revised:** 29 April 2021; **Accepted:** 03 May 2021

**Corresponding author:** Jonas Berg

**E-mail** ✉ [jberg.academic@hotmail.com](mailto:jberg.academic@hotmail.com)

### Introduction

Modern organizations operate in environments characterized by constant uncertainty and change, making crises an inevitable aspect of their existence. Such disturbances threaten operational continuity and can erode public trust if not managed effectively before, during, and after their occurrence. This research focused on internal dynamics—specifically organizational culture and the information systems supporting decision-making [1].

Numerous studies argue that stable and effective performance often raises stakeholder expectations for continued improvement. Yet, when a crisis arises, performance typically deteriorates, pushing managers to employ innovative, unconventional responses to recover [2, 3].

Because both internal and external conditions constantly evolve, organizations must react swiftly to remain aligned with their missions and objectives. Therefore, structured strategic assessments of environmental factors have become essential [4]. Research also shows that many organizations fail to learn adequately from prior experiences, emphasizing the importance of institutional learning to mitigate future crises and avoid severe consequences from repeated errors [5].

This analytical study seeks to determine the variables influencing the creation of organizational harmony among different strategic dimensions and to offer theoretical and practical insights for further exploration of these interrelations.

### Research problem

The volatility of today's world has compelled researchers to view crisis management not merely as a defensive process but as an opportunity to convert challenges into potential gains or to safeguard performance levels. Nevertheless, past research on



© 2021 The Author(s).

Copyright CC BY-NC-SA 4.0

this subject remains inconsistent and fragmented [2, 6]. Within this context, organizational culture plays a vital role in shaping crisis-handling approaches, as it establishes the norms that guide collective response [1, 2, 7].

Organizations continually pursue efficiency and long-term development, prompting renewed efforts to reexamine the factors influencing performance and sustainability [2, 8-10].

Given that effective crisis response relies on information accuracy and technological systems to reduce uncertainty, this research emphasizes the inclusion of information systems strategy as a core variable in crisis management. Despite the broad adoption of these systems as strategic tools, their actual contribution to performance improvement and risk management remains unclear. This ambiguity has encouraged further investigation into their role [10-13].

All research related to crisis management has generally followed two distinct orientations. The first concerns the external dimension, emphasizing the emotional and communicative aspect of crises and focusing on reducing negative impacts through appealing to public sentiment. The second orientation examines crises from an internal organizational standpoint, concentrating on internal elements such as structure, culture, and strategic practices—though these aspects have often been analyzed in isolation. Numerous scholars have highlighted the necessity of addressing both internal and external perspectives when assessing the influence of crises on different sectors, including education [2].

In this context, the idea of strategic coherence among the fundamental components of organizations becomes vital. During crises, information scarcity and the unpredictability of environmental reactions make it challenging to anticipate consequences or to evaluate the outcomes of applied interventions. Thus, adopting a comprehensive strategic framework capable of offering both technical and managerial support is essential. Several studies have therefore emphasized the importance of understanding how organizational strategies transform and evolve under crisis conditions and the extent to which these strategies adapt to situational demands. Furthermore, some scholars have encouraged examining crisis management and its implications through strategic frameworks to determine how these approaches shape organizational performance [1, 14, 15].

Prior research presents little consensus, showing substantial variation in identifying the most effective forms of strategic reasoning for confronting crises and limiting their damage. The ongoing academic dialogue continues to call for clearer identification of proactive strategic practices that can effectively address unstable economic and social contexts [2, 16].

In line with these scholarly recommendations, the present study investigates the interrelated effects among crisis management approaches, organizational strategies, and organizational culture within private Jordanian universities from the standpoint of academic administrators. This aligns with earlier research urging the study of such relationships [17]. The research was conducted during the COVID-19 pandemic to understand how the crisis influenced these variables within higher education institutions.

## Literature Review and Hypothesis Development

### *Organizational culture*

Some authors view organizational culture as a strategic asset that provides a sustainable competitive advantage. Therefore, the success or failure of institutions is often connected to how well cultural values and meanings are understood among employees [18].

Organizational culture can be described as an integrated behavioral framework composed of values, beliefs, norms, and assumptions that shape how individuals within an organization act and interact internally and externally. Scholars typically identify three primary layers of organizational culture:

First dimension – Observable artifacts:

This refers to the visible and emotional manifestations that influence how clients and the public experience the organization. It reflects the psychological impressions created through surface-level interactions. Unfortunately, many educational institutions disregard this emotional dimension and fail to engage stakeholders effectively [18]. The tragic incident of a student's self-immolation a few months ago serves as a painful reminder of this neglect.

Second dimension – Values:

Values represent the criteria defining acceptable behavior within an organization. During financial hardship, especially in education, performance standards are often diluted to avoid accountability, leading to a focus solely on financial metrics while overlooking other crucial criteria such as development, employment balance, service quality, and market equilibrium [18].

Third dimension – Underlying assumptions:

This layer pertains to the implicit beliefs and subconscious understandings that form the foundation of organizational behavior. Misinterpretations or contradictions within these cultural assumptions can result in behavior that is poorly suited to future challenges [18].

These foundational assumptions underpin the values of organizational culture and shape institutional actions. Although generally recognized, they are rarely formalized, discussed, or documented, becoming part of the organization's routine operations by default. Shared values and norms facilitate communication and influence how knowledge spreads across the organization. In a crisis-oriented culture, strong emphasis is placed on continuous learning—employees identify, report, and

analyze mistakes, then embed corrective lessons into organizational processes. Informal cultural ties, such as close personal relationships, also encourage knowledge exchange. Cultures that value innovation and adaptability tend to promote change and creativity; however, overly rigid or dominant cultures can stifle dissent and lead to groupthink, limiting the organization's ability to challenge ineffective ideas [1, 7, 19].

For the purposes of this study, organizational culture was divided into four sub-dimensions:

- Cooperativeness: Reflects internal harmony, flexibility, trust, empowerment, teamwork, and shared decision-making. Organizations emphasizing cooperation promote information sharing and mutual empathy, thereby reinforcing trust.
- Innovativeness: Concerns creative capability within the external environment, focusing on adaptation, proactivity, and continuous development.
- Consistency: Represents control mechanisms within the organization—rules, procedures, and structures that ensure internal order and coordination. Institutions valuing consistency are often more formalized and stable.
- Effectiveness: Involves external control factors such as competitiveness, achievement of goals, productivity, and efficiency, highlighting the pursuit of advantages from emerging market opportunities [20].

### *Crisis management strategies*

Scholars widely acknowledge that today's economic and social environments have become increasingly unstable, demanding a shift in managerial thinking. This evolving context calls for abandoning traditional, reactive methods of crisis management and adopting a forward-looking, integrated approach to leadership [2].

Under such unpredictable circumstances, decision-making becomes more complex, leading to the need for a modern redefinition of crisis within management theory. A crisis can be described as *a cluster of volatile events that cause sudden, substantial disruption*, or as *a breakdown in normal functioning that requires direct intervention from crisis management mechanisms*. Therefore, the concept of crisis generally encompasses three components: organizational threat, sudden onset, and limited decision-making time. In these situations, crisis management seeks to interpret, assess, and define the problem to create practical and rational responses. Essentially, a crisis introduces new dynamics that compel organizations to reconstruct their strategic frameworks and implementation processes [14, 21].

Organizations typically approach crises through two strategic paths. The first is the Reactive or Response Approach, where leaders respond to disruptions using established rules and protocols. This method relies heavily on existing regulations and is common in most institutions, including universities. Adjustments to these rules occur only after major disruptions that distort markets or trigger significant economic repercussions—a practice known as harmonic crisis management.

The second is the Proactive or Preventive Approach, which adopts a broader and more anticipatory perspective. This approach requires organizations to identify early risk indicators and potential crisis triggers in order to reduce their impact. It emphasizes collaborative risk management, which aims to minimize exposure through foresight and preparedness [2, 22].

Performance measurement during a crisis differs fundamentally from pre-crisis assessment; thus, new evaluation criteria must be developed to determine how effectively organizations reduce crisis impact. However, emotional reactions accompanying crises—such as frustration, disillusionment, and pessimism—can intensify the damage. The key to recovery lies in strengthening both internal and external cooperation. Yet, crisis responses diverge along two main lines:

- an internal dimension, where managers craft strategic solutions to mitigate organizational impact, and
  - an external dimension, which focuses on addressing stakeholder perceptions and maintaining public trust.
- If not balanced, the external dimension may lead management to simulate performance rather than achieve genuine improvement. Consequently, integrating these two perspectives—before and during the crisis—is vital to achieve alignment between management strategies and stakeholder expectations. More effective responses typically occur when both internal and external actors collaborate to resolve the underlying issues that triggered the crisis [23-26].

Various frameworks have been proposed to categorize crises and their responses. For instance, Bradford and Garrett introduced four crisis types, each linked to a specific response model: Commission Situations require a *Denial Strategy*, Control Situations call for an *Excuse Strategy*, Standards Situations are handled through *Justification*, and Agreement Situations rely on *Concession*. Later studies expanded on this model, suggesting that responses could also involve corrective or reinforcing strategies to repair reputation and trust [23, 27].

A major contribution to this field is the Situational Crisis Communication Theory (SCCT), which is structured around three main components.

1. Instructive Information – communicating what occurred, how stakeholders can protect themselves, and what the organization must do to safeguard its own interests.
2. Crisis Response Options – managers can: (a) deny the crisis, (b) minimize perceived harm, or (c) cooperate with stakeholders to repair damage.
3. Strategic Alignment – crisis managers must ensure the chosen response matches both the crisis severity and public acceptance [28].

For this study, the model developed by Sambir, Michael, Wang, and Kel was used as the foundation for identifying stages of effective crisis management. Their model outlines three analytical stages:

- the Looking Forward Stage, which focuses on recognizing future threats and opportunities,
- the Looking Into Stage, examining internal operational mechanisms, and
- the Looking Around Stage, involving external scanning of competitors and the surrounding environment [29].

### *Strategic orientations*

The volatile and unpredictable economic landscape of recent years has underscored the necessity for organizations to maintain continuous strategic readiness. Management teams are increasingly aware of the need to update strategic frameworks and remain adaptive to both internal and external forces. Strengthening organizational learning and enhancing adaptability are crucial in navigating economic and social uncertainty, particularly during crises [14].

Post-crisis statements and actions are closely linked to an organization's strategic orientation, since its initial response derives from the crisis management framework already in place—an element that significantly influences reputation. Much of the previous literature has centered on communication strategies, focusing narrowly on reputation management while neglecting broader operational consequences. However, an effective crisis response must go beyond image protection and ensure economic stability and performance continuity in line with institutional objectives.

During crises, a new priority emerges: mitigating potential harm by improving strategic effectiveness faster than competitors. The foundation of any sound crisis management strategy lies in the flexibility of the organization's strategic orientation. Greater flexibility expands the range of options available for developing crisis responses. In this sense, the organizational strategy functions as a rational framework that guides crisis managers in choosing the most appropriate alternatives for confronting the crisis and limiting its effects [28].

Strategic planning in management commences with an in-depth evaluation of the organization's resources and its external environment, emphasizing the continuation of activities aligned with the institution's mission and vision. Both resources and information are managed according to these guiding principles, and organizational performance is continuously adjusted to accommodate environmental fluctuations. The vision outlines what the organization aspires to become in the future, while the mission defines its essential purpose and rationale for existence. Hence, maintaining coherence and coordination between these two elements—before, during, and after a crisis—is crucial [15].

In addition, several academics have analyzed and reinterpreted this concept using varying terminologies. For example, Miles and Snow classified strategic orientations into four principal behavioral types: Defenders, Prospectors, Analyzers, and Reactors. They employed a three-point scale (high, moderate, low) to measure six distinct indicators that describe these orientations: Defensiveness, Risk Aversion, Aggressiveness, Proactiveness, Analytical Approach, and Futurity [30, 31].

Meanwhile, the Kaizen approach presents a contrasting strategic philosophy grounded in incremental and perpetual improvement. This Japanese management system emphasizes ongoing refinement across all levels of the organization. Although the progress achieved is steady and gradual, it remains consistent and sustainable, targeting the most critical operational areas. Moreover, Kaizen encourages a collaborative, team-oriented culture to drive innovation. For this research, the organizational strategy variable is examined through the principles of Kaizen, namely: customer focus, teamwork enhancement, quality refinement, and technological efficiency [32, 33].

### *Study hypotheses*

Drawing on prior scholarly recommendations, this research formulates four primary hypotheses, from which additional sub-hypotheses are derived and later analyzed in the results section:

H1: Organizational Strategic Orientation significantly affects Crisis Management Strategies (Covid-19).

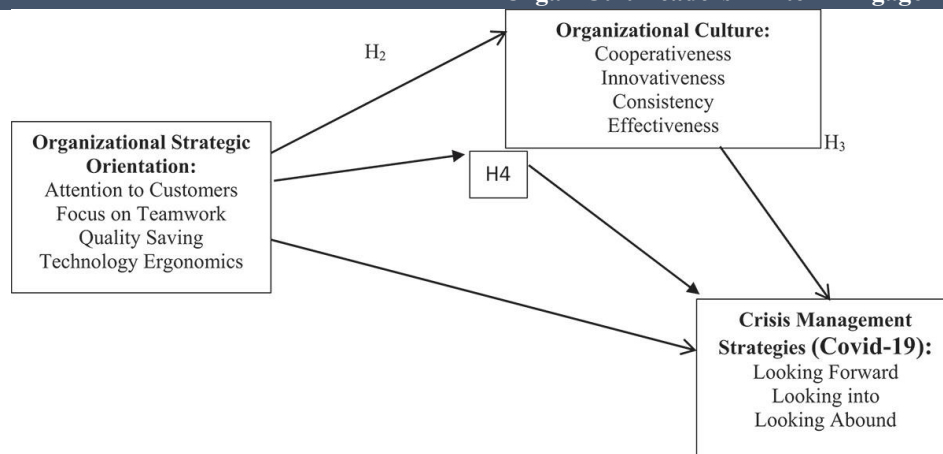
H2: Organizational Strategic Orientation significantly influences Organizational Culture.

H3: Organizational Culture significantly impacts Crisis Management Strategies (Covid-19).

H4: Organizational Culture serves as a mediator between Organizational Strategic Orientation and Crisis Management Strategies (Covid-19).

### *Conceptual framework*

The conceptual framework visually represents the logical structure of the study, illustrating how the main variables interact and influence each other. **Figure 1** demonstrates the mediating role of Organizational Culture in the connection between Organizational Strategic Orientation and Crisis Management Strategies (Covid-19) among Private Jordanian Universities.



**Figure 1.** Conceptual Framework

## Methodology

### Data

This research adopts a quantitative descriptive design, targeting students enrolled in private Jordanian universities. In research terminology, the sample refers to the subgroup from which data are collected, while the population denotes the larger community to which results are generalized [34]. According to Rahi [35], a properly chosen sample enables researchers to make accurate generalizations about the population.

Accordingly, this study collected data from 384 student respondents. The questionnaire was divided into four major sections, each based on validated measures adapted from previous research.

- Organizational Strategic Orientation comprised four dimensions: *Customer Orientation*, *Teamwork Focus*, *Quality Improvement*, and *Technological Ergonomics* [32, 33].
- Organizational Culture consisted of four aspects: *Cooperativeness*, *Innovativeness*, *Consistency*, and *Effectiveness* [20].
- Crisis Management Strategies included: *Looking Forward*, *Looking Into*, and *Looking Around* [29].

### Data analysis technique

The study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze the collected survey data. Before performing the statistical tests, data screening and refinement procedures were undertaken to ensure accuracy and representativeness. Using SmartPLS 3.0, the model's reliability, validity, and hypothesized relationships were evaluated.

PLS-SEM was selected to examine the mediating influence of Organizational Culture on the link between Organizational Strategic Orientation and Crisis Management Strategies (Covid-19) across private Jordanian universities. This technique is ideal for testing causal pathways within complex theoretical models based on empirical evidence.

The PLS-SEM framework integrates measurement and structural models: the measurement component relates observed variables to latent constructs, while the structural part defines the relationships among these constructs. In this study, a reflective-reflective Type I model was employed, wherein lower-order dimensions are individually reflective yet interconnected.

According to Jones [36], this approach—termed the organizational common factor model—captures the overarching factor shared by multiple distinct but related constructs. This modeling structure is particularly suitable when the objective is to identify a unifying underlying factor that links several conceptually distinct yet interdependent variables.

## Results

### Findings of the study

Out of the 384 distributed surveys, a total of 250 usable responses were collected, representing a 65.1% response rate. The findings presented in this section align with the research objectives and summarize the outcomes derived from the Structural Equation Modeling (SEM) analysis.

Missing data refers to cases where a participant leaves one or more survey items unanswered. In this study, a frequency and missing value analysis was performed for every measurement indicator to confirm the absence of substantial missing information. The screening process revealed minimal missing values, which were replaced using the median responses for the respective variables.

Outlier detection was also conducted, as extreme scores can distort data interpretation [37]. In addition to evaluating histograms and boxplots, each variable's standardized z-score was inspected for univariate outliers. According to Hair *et al.*



[38], any observation with a z-value above +4.0 or below -4.0 is categorized as an outlier and was consequently removed from further analysis.

### Measurement model

To verify measurement reliability, internal consistency was assessed through Composite Reliability (CR). As presented in **Table 1**, all constructs achieved CR values exceeding 0.6, satisfying Hair *et al.*'s [37] threshold for acceptable reliability. When an indicator's squared loading falls below 0.7 but both Composite Reliability and Average Variance Extracted (AVE) meet the required standards, the indicator may still be retained due to its theoretical relevance.

Convergent validity was determined by ensuring AVE values surpassed 0.5, while discriminant validity was examined through the Fornell–Larcker criterion (**Table 2**). According to this criterion, the square root of the AVE for each latent construct must be greater than its correlations with other constructs. The results confirmed that all variables met the accepted discriminant validity conditions.

**Table 1.** Internal consistency reliability for measurement constructs

Construct	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Crisis Management Strategies	0.928	0.928	0.938	0.539
Organizational Culture	0.965	0.968	0.968	0.551
Organizational Strategic Orientation	0.940	0.941	0.947	0.545

**Table 2.** Fornell–Larcker criterion results for discriminant validity

Construct	Crisis Management Strategies	Organizational Culture	Organizational Strategic Orientation
<b>Crisis Management Strategies</b>	<b>0.734</b>		
<b>Organizational Culture</b>	0.609	<b>0.742</b>	
<b>Organizational Strategic Orientation</b>	0.507	0.682	<b>0.738</b>

### Common method bias (CMB)

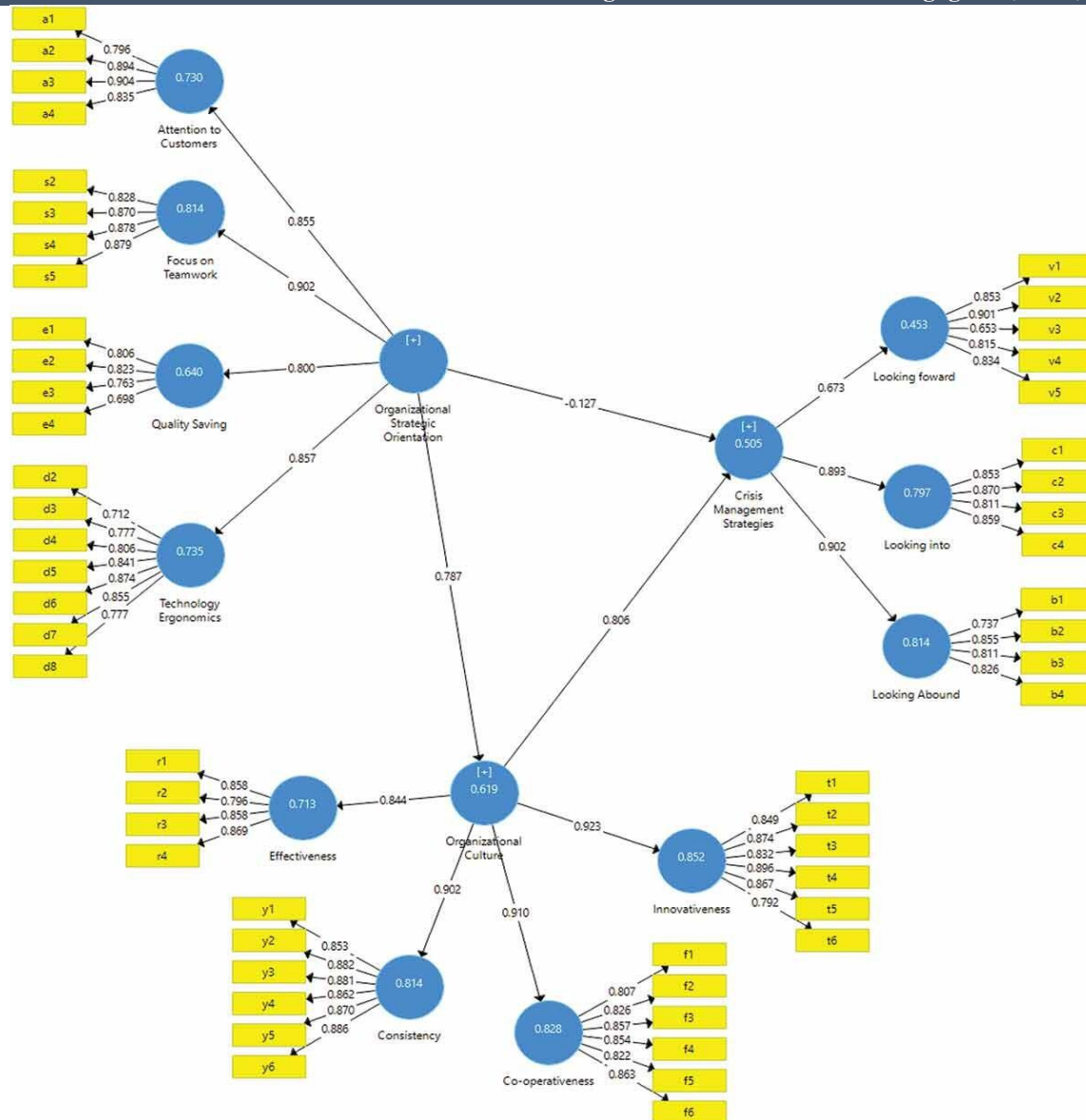
To test for common method variance (CMV), both Harman's single-factor test and the Common Latent Factor (CLF) approach were employed. The results of Harman's test showed that the first factor accounted for 45.37% of the total variance, which is below the 50% threshold, indicating that no significant CMB issue was present in the dataset.

### Structural model analysis results

Since PLS-SEM is a non-parametric technique, it does not require the data to be normally distributed. However, this characteristic can sometimes cause inflation or deflation of t-values, leading to Type I errors. To mitigate this risk, a bootstrapping procedure was implemented, following the recommendation of Wong (2013). The process generated 5,000 resamples with replacement to compute standard errors and determine the t-statistics for testing path significance.

The initial phase of the SmartPLS Structural Equation Modeling involved creating a theoretical model diagram reflecting the relationships among Organizational Culture, Organizational Strategic Orientation, and Crisis Management Strategies (Covid-19). In alignment with the study hypotheses, the directional arrows between constructs indicate causal relationships.

**Figure 1** illustrates the standardized path estimates within the structural model, including the mediating function of Organizational Culture. Moreover, **Figure 2** presents the measurement model results, where items a5, s1, e5, and d1 were removed because their factor loadings were below the 0.6 threshold suggested by Hair *et al.* [37].



**Figure 2.** Measurement model displaying factor loadings

The summarized PLS-SEM outcomes are reported in **Table 3**, showing the path coefficients, standard deviations (STDEV), and p-values for each hypothesized relationship.

The results revealed a significant negative link between Organizational Strategic Orientation and Crisis Management Strategies (Covid-19). Specifically, a 1% increase in strategic orientation corresponded to a 0.127 decrease in crisis management strategies among private Jordanian universities, confirming H1.

Conversely, a significant positive relationship was observed between Organizational Strategic Orientation and Organizational Culture; a 1% rise in strategic orientation resulted in a 0.787 increase in organizational culture, supporting H2.

Similarly, Organizational Culture exhibited a positive effect on Crisis Management Strategies (Covid-19), where a 1% increase in culture led to a 0.806 improvement in crisis management within the same context. These findings validate H3.

**Figure 3** presents the standardized path results generated by SmartPLS.

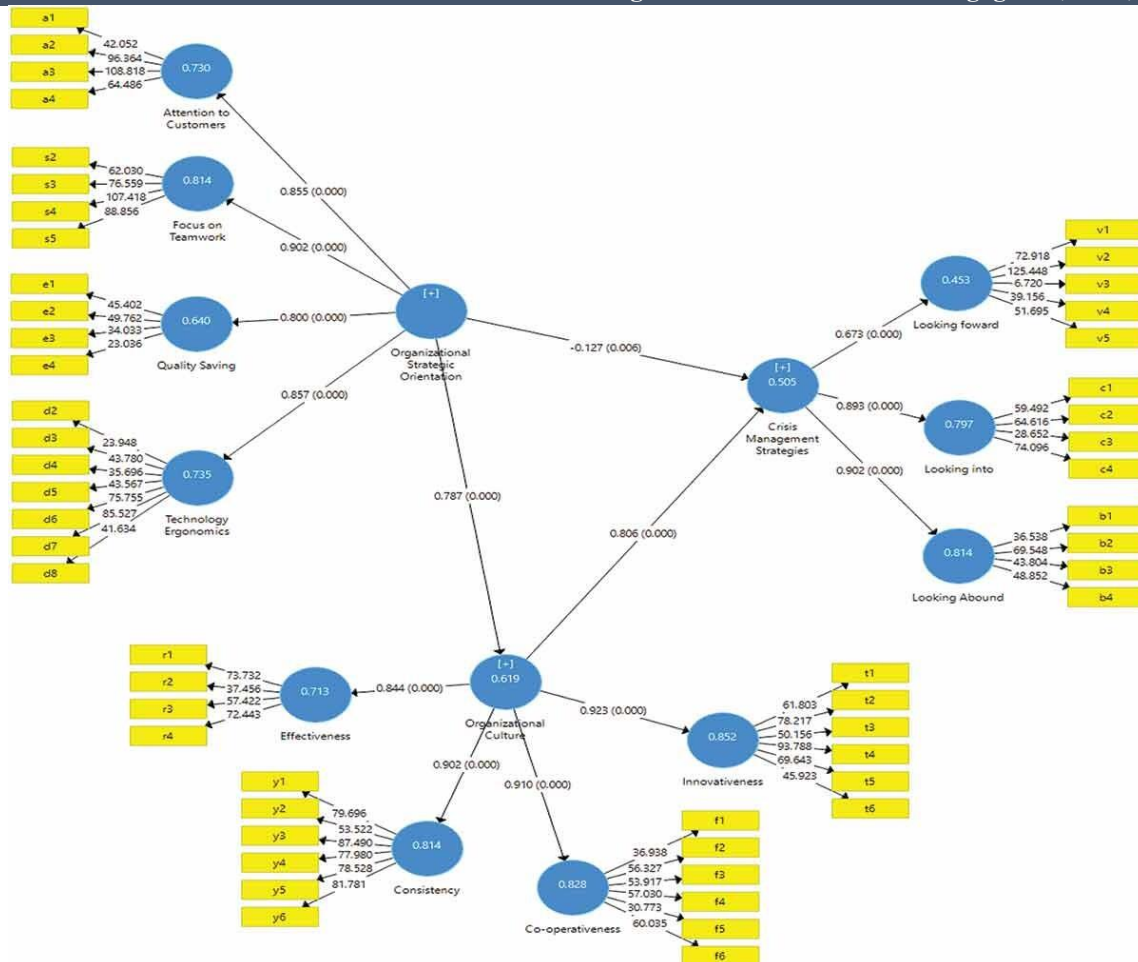


Figure 3. SmartPLS standardized model outcomes

Table 3. Assessment results for Harman's One-Factor Solution

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	19.509	45.370	45.370	19.509	45.370	45.370

*Extraction Method: Principal component analysis*

The  $R^2$  indicator reflects how much of the variation in the dependent constructs can be clarified by the independent ones. The  $R^2$  outcomes, displayed in **Table 4**, demonstrate the extent to which the model's predictors contribute to explaining the variance in the dependent variable. Specifically, the variables forecasting crisis management strategies account for 50.50% of the total variance, leaving around 49.50% as unexplained or residual variation in crisis management strategies (Covid-19).

Similarly, as shown in **Table 5**, the determinants of organizational culture explain approximately 61.9% of its variance, meaning that nearly 38.1% remains unaccounted for. The  $f^2$  effect sizes for all exogenous constructs indicate a notable magnitude of influence. In contrast, the  $Q^2$  statistics from this research reveal limited predictive relevance for those constructs. Following Sarstedt *et al.* [39], benchmark  $Q^2$  values of 0.02, 0.15, and 0.35 correspond respectively to low, moderate, and high predictive capability for endogenous constructs.

Table 4. Summary of Path Coefficients

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values	Decision
Organizational Strategic Orientation -> Crisis Management Strategies	-0.127	0.047	2.721	0.007	Supported
Organizational Strategic Orientation -> Organizational Culture	0.787	0.017	47.182	0.000	Supported
Organizational Culture -> Crisis Management Strategies	0.806	0.043	18.655	0.000	Supported



**Table 5.** Summary of R<sup>2</sup> Values

	R <sup>2</sup>	f <sup>2</sup>	Q <sup>2</sup>
Crisis Management Strategies	0.505	0.059	0.182
Organizational Culture	0.619		

### Mediation analysis

#### Indirect effects

This research followed the mediation testing procedure recommended by Preacher and Hayes [40]. The bootstrapping technique was utilized to assess indirect effects and determine the significance of the mediating relationship. According to Preacher and Hayes (2008), mediation exists if the 95% bootstrapped confidence interval (CI: LL–UL) for the indirect path does not include zero. The computed outcomes are summarized in **Table 6**.

**Table 6.** Indirect Effects

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Organizational Strategic Orientation → Organizational Culture → Crisis Management Strategies	0.634	0.040	15.752	0.000

As presented in **Table 6**, the bootstrap analysis confirmed that the indirect path (Organizational Strategic Orientation → Organizational Culture → Crisis Management Strategies (Covid-19)) was significant, with  $\beta = 0.634$ ,  $t = 15.752$ , and  $p < 0.01$ . The 95% Boot CI (LL = 0.209, UL = 0.392) did not cross zero, further validating the mediation effect. These results demonstrate that Organizational Culture acts as a mediating variable between Organizational Strategic Orientation and Crisis Management Strategies (Covid-19) among private Jordanian universities. Consequently, Hypothesis H4 was supported.

#### Goodness of Fit (GoF)

The Goodness of Fit Index (GoF) was calculated to evaluate the overall quality of both the measurement and structural models. The obtained GoF value of 0.521 indicated a strong model fit, as it exceeds the 0.36 benchmark for satisfactory model adequacy.

The computation is presented as follows:

$$= \sqrt{AVE \times R^2} = \sqrt{0.539 \times 0.505} = \sqrt{0.272} = 0.52 \quad (1)$$

### Conclusions and Recommendations

After analyzing the statistical results, the following conclusions and recommendations were formulated:

1. A significant positive correlation was found between organizational culture dimensions—namely cultural innovativeness, cultural consistency, and cultural effectiveness—and organizational strategy. Among these, cultural innovativeness had the strongest effect, followed by cultural effectiveness, and finally cultural consistency. Notably, cultural cooperativeness showed no significant influence on organizational strategy. Thus, university administrators should prioritize cultural innovativeness to better align strategic orientation with crisis management needs, particularly during events such as the Covid-19 pandemic.
2. A positive link also existed between organizational culture dimensions and crisis management strategies. The most substantial influence stemmed from cultural innovativeness, followed by cultural cooperativeness, cultural consistency, and finally cultural effectiveness. Therefore, private universities should reinforce cultural innovation as a means of minimizing the effects of the Covid-19 crisis on their institutional stability.
3. Results further indicated a positive relationship between crisis strategy components and organizational strategy. The Overlooking the Crisis strategy exerted the greatest influence, but it weakened universities' abilities to manage the Covid-19 crisis effectively, as denial-based strategies heighten vulnerability. In contrast, the Studying the Crisis strategy had a moderate impact, while Mistake Identification and Future Aspirations showed the weakest influences.
4. Findings revealed that private universities tend to embrace an innovative cultural orientation focused on social engagement and cultural events but overlook cultural cooperativeness. This tendency has confined strategic approaches within traditional frameworks. Crisis management strategies also remained conventional, emphasizing cautious innovation to avoid cultural tension. Initially, many institutions employed the Overlooking the Crisis approach, but as the situation intensified, they shifted toward understanding and adapting to the crisis context, identifying errors, and striving to achieve future-oriented goals. This process demonstrates how the Covid-19 crisis reshaped organizational culture in Jordanian private universities.

5. During the Covid-19 period, some universities adjusted their strategic approaches, though most did so belatedly, resulting in considerable setbacks. Conversely, a few institutions had proactively integrated crisis-resilient strategies and adaptive cultural frameworks, which substantially mitigated pandemic-related impacts.

6. The research domain concerning crisis management, organizational strategy, and organizational culture continues to exhibit conflicting findings. This indicates the necessity for further empirical studies that employ alternative measures and explore different institutional sectors. Extending the model across varied environments will contribute to a more comprehensive and precise understanding of these interrelationships.

**Acknowledgments:** None

**Conflict of interest:** None

**Financial support:** None

**Ethics statement:** None

## References

1. Deverell E, Olsson EK. Organizational culture effects on strategy and adaptability in crisis management. *Risk Manag.* 2010;12(2):116-34.
2. Bundy J, Pfarrer MD, Short CE, Coombs WT. Crises and crisis management: Integration, interpretation, and research development. *J Manag.* 2017;43(6):1661-92.
3. Smallman C, Weir D. Communication and cultural distortion during crises. *Disaster Prev Manag.* 1999;8(1):33-41.
4. Tawaha M, Hajar YA. Investigating the impact of strategic orientations for organizations and information systems on performance (profitability, satisfaction). 2017.
5. Broekema W, Van Kleef D, Steen T. What factors drive organizational learning from crisis? Insights from the Dutch food safety services' response to four veterinary crises. *J Contingencies Crisis Manag.* 2017;25(4):326-40.
6. Coombs WT. Revising situational crisis communication theory. *Soc Media Crisis Commun.* 2017;1:21.
7. Argote L. *Organizational learning: Creating, retaining and transferring knowledge*: Springer Science & Business Media; 2012.
8. Botella J, Peña D, Contreras MJ, Shih PC, Santacreu J. Performance as a function of ability, resources invested, and strategy used. *J Gen Psychol.* 2009;136(1):41-6.
9. Byrd TA, Pitts JP, Adrian AM, Davidson NW. Examination of a path model relating information technology infrastructure with firm performance. *J Bus Logist.* 2008;29(2):161-87.
10. Özer F, Tınaztepe C, editors. *Effect of strategic leadership styles on firm performance: A study in a Turkish SME* 2014.
11. Kobelsky K, Larosiliere G, Plummer E. The impact of information technology on performance in the not-for-profit sector. *Int J Account Inf Syst.* 2014;15(1):47-65.
12. Nakata C, Zhu Z, Kraimer ML. The complex contribution of information technology capability to business performance. *J Manag Issues.* 2008;20(4):485-506.
13. Venkatesh V, Bala H, Venkatraman S, Bates J. Enterprise architecture maturity: The story of the veterans health administration. *MIS Q Exec.* 2007;6(2):79-90.
14. Lesenciuc A, Nagy D. Role of communication in crisis management. *Def Resour Manag 21st Century.* 2020;15:103-18.
15. Tanković AČ. Defining strategy using vision and mission statements of Croatian organizations in times of crisis. *Econ Res-Ekon Istraživanja.* 2013;26(sup1):331-42.
16. James EH, Wooten LP, Dushek K. Crisis management: Informing a new leadership research agenda. *Acad Manag Ann.* 2011;5(1):455-93.
17. Ki EJ, Brown KA. The effects of crisis response strategies on relationship quality outcomes. *J Bus Commun.* 2013;50(4):403-20.
18. Carmeli A, Cohen A. The financial crisis of the local authorities in Israel: A Resource-based analysis. *Public Adm.* 2001;79(4):893-913.
19. Wang J, Hutchins HM, Garavan TN. Exploring the strategic role of human resource development in organizational crisis management. *Hum Resour Dev Rev.* 2009;8(1):22-53.
20. Chang SE, Lin CS. Exploring organizational culture for information security management. *Ind Manag Data Syst.* 2007;107(3):438-58.
21. Choi JN, Sung SY, Kim MU. How do groups react to unexpected threats? Crisis management in organizational teams. *Soc Behav Pers.* 2010;38(6):805-28.

22. Bundy J, Pfarrer MD. A burden of responsibility: The role of social approval at the onset of a crisis. *Acad Manag Rev.* 2015;40(3):345-69.
23. Huang YH. Crisis situations, communication strategies, and media coverage: A multicase study revisiting the communicative response model. *Commun Res.* 2006;33(3):180-205.
24. Mazzei A, Ravazzani S. Internal crisis communication strategies to protect trust relationships: A study of Italian companies. *Int J Bus Commun.* 2015;52(3):319-37.
25. Petriglieri JL. Co-creating relationship repair: Pathways to reconstructing destabilized organizational identification. *Adm Sci Q.* 2015;60(3):518-57.
26. Ye L, Ki EJ. Organizational crisis communication on Facebook. *Corp Commun.* 2017;22(1):80-92.
27. Bradford JL, Garrett DE. The effectiveness of corporate communicative responses to accusations of unethical behavior. *J Bus Ethics.* 1995;14(11):875-92.
28. Coombs WT. The protective powers of crisis response strategies: Managing reputational assets during a crisis. *J Promot Manag.* 2006;12(3-4):241-60.
29. Wardman JK. Recalibrating pandemic risk leadership: Thirteen crisis ready strategies for COVID-19. *J Risk Res.* 2020;23(7-8):1092-120.
30. Miles RE, Snow CC. *Organizational strategy, structure, and process*: McGraw-Hill; 2001.
31. Yuan Y, Lu LY, Tian G, Yu Y. Business strategy and corporate social responsibility. *J Bus Ethics.* 2020;162(2):359-77.
32. Felmban ATM, Alsharief RYA. The role of Kaizen's Strategy (Japanese Model) in empowering human resources (Field study on female employees in the general administration of education in Jeddah). *Admin Legal Sci.* 2020;4(5):151-68.
33. Vieira L, Balbinotti G, Varasquin A, Gontijo L. Ergonomics and Kaizen as strategies for competitiveness: A theoretical and practical in an automotive industry. *Work.* 2012;41(Suppl 1):1756-62.
34. Schoonenboom J, Johnson RB. How to construct a mixed methods research design. *KZfSS Kölner Z Soziol Sozialpsychol.* 2017;69(2):107-31.
35. Rahi S. Research design and methods: A systematic review of research paradigms, sampling issues and instruments development. *Int J Econ Manag Sci.* 2017;6(2):1-5.
36. Jones DI. Parallel architectures for real-time control. *Electron Commun Eng J.* 1989;11:217-23.
37. Hair Jr JF, Howard MC, Nitzl C. Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *J Bus Res.* 2020;109:101-10.
38. Hair Jr JF, Sarstedt M, Matthews LM, Ringle CM. Identifying and treating unobserved heterogeneity with FIMIX-PLS: Part I—method. *Eur Bus Rev.* 2016.
39. Sarstedt M, Ringle CM, Smith D, Reams R, Hair Jr JF. Partial least squares structural equation modeling (PLS-SEM): A useful tool for family business researchers. *J Fam Bus Strateg.* 2014;5(1):105-15.
40. Preacher KJ, Hayes AF. SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behav Res Methods Instrum Comput.* 2004;36(4):717-31.