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The Interplay of Crisis Management, Organizational Culture, and Strategic Orientation in Private Jordanian Universities During COVID-19

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Abstract

This study investigates the interrelationships between crisis management strategies during the COVID-19 pandemic, organizational strategic orientation, and organizational culture in private universities in Jordan. A total of 384 questionnaires were distributed via email to faculty members holding administrative positions, such as Heads of Departments and Deans, with 250 responses received. The study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze the data. The findings indicate that organizational strategic orientation negatively influences crisis management strategies. Additionally, organizational strategic orientation was found to have a significant positive relationship with organizational culture. Organizational culture, in turn, significantly impacts crisis management strategies, and it also mediates the relationship between strategic orientation and crisis management in private universities.

Keywords: Crisis management, Organizational culture, Organizational strategy, PLS-SEM

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Introduction

Crisis has become a defining feature of modern organizations operating in dynamic and unpredictable environments. Such crises can threaten an organization's continuity, diminish its ability to serve stakeholders, and damage its reputation if poorly managed before, during, or after the event. Organizational components, including culture and information systems, play a critical role in shaping effective crisis responses [1].

Previous research indicates that organizations' strong performance sets stakeholder expectations for continuity. However, crises often disrupt this performance, prompting managers to implement unconventional measures to restore stability and enhance outcomes [2, 3]. The ongoing shifts in internal and external opportunities and threats require organizations to respond rapidly, emphasizing the importance of strategic environmental assessments aligned with the organization's mission and objectives [4]. Yet, many organizations fail to learn from past crises, highlighting the need for structured mechanisms to improve organizational learning and crisis preparedness [5].

This study investigates factors that influence organizational harmonization by analyzing the interplay between crisis management strategies, organizational culture, and strategic orientation. By doing so, it aims to provide both practical insights and a foundation for future research.

Research problem

In today's fast-changing environment, organizations increasingly adopt crisis management approaches to convert disruptions into opportunities or mitigate their negative effects. Prior studies have highlighted gaps and inconsistencies in understanding these strategies, particularly in relation to organizational culture, which serves as a vital source of effective crisis responses [1, 2, 6].

Organizations aim to sustain and improve performance, yet crises challenge this goal, necessitating careful study of internal factors like strategic orientation, culture, and information systems [5, 7, 8]. Information systems, increasingly leveraged as strategic tools, are crucial in managing uncertainty, though their impact on performance during crises remains debated [9-11].

Most research on crisis management has focused either on external aspects, such as public perception and emotional response, or internal dimensions, including structure, culture, and strategy. Rarely have these factors been studied together, especially in the education sector, where both internal and external dynamics are critical [2].

Strategic alignment among core organizational components is essential during crises, given limited information and unpredictable environmental responses. Understanding how strategies evolve and interact with culture and management practices is critical for mitigating the negative effects of crises [1, 12, 13]. Despite numerous studies, consensus is lacking on the optimal strategic approaches for crisis response, highlighting the need for research that integrates these elements.

In line with these recommendations, this study examines the mutual effects of crisis management strategies, organizational culture, and strategic orientation in private Jordanian universities, focusing on the perspectives of academic administrators during the COVID-19 pandemic.

Literature Review and Hypothesis Development

Organizational culture

Organizational culture is widely acknowledged as a strategic resource that can provide sustainable competitive advantage. The success or failure of an organization is often linked to how well its cultural framework is understood and applied by employees [14]. It can be defined as an integrated system of behaviors, values, beliefs, principles, and attitudes that shape both internal and external organizational conduct. Organizational culture manifests in observable artifacts, values, and underlying assumptions. Observable artifacts refer to the emotional and psychological impressions experienced by an organization's stakeholders, reflecting their perception of the institution. Unfortunately, in many educational organizations, this dimension is often neglected, sometimes resulting in severe incidents, such as critical events involving students [14]. Values represent the criteria that determine what is acceptable within the organization. In educational institutions facing financial difficulties, performance assessment is often limited to financial measures, while other important criteria, such as development, employment, service quality, and market balance, are overlooked [14]. Basic assumptions are the underlying beliefs that shape behavior and influence how employees interpret the culture. Misunderstandings or contradictions in these assumptions may result in inappropriate responses to future challenges [14].

These basic assumptions serve as the foundation for organizational values and guide decision-making processes. They are often implicit and adopted automatically, influencing communication, knowledge diffusion, and organizational behavior. In a crisis-oriented culture, there is a strong emphasis on learning from mistakes, sharing knowledge, and adopting collective approaches to problem-solving. Cultures that promote innovation encourage knowledge acquisition and adaptive change, whereas highly rigid cultures may foster groupthink, limiting critical evaluation of new information [1, 6, 15]. For the purpose of this study, organizational culture is understood through four dimensions: cooperativeness, which emphasizes collaboration, information sharing, trust, and teamwork within the organization; innovativeness, reflecting creativity, adaptability, and the pursuit of pioneering solutions in response to external challenges; consistency, which focuses on internal coordination, rules, and formal structures; and effectiveness, which emphasizes external competitiveness, goal achievement, productivity, and the ability to exploit market opportunities [16].

Crisis management strategies

Organizations today operate in increasingly volatile economic and social environments, requiring new approaches to management and decision-making. This dynamic environment has prompted a shift from reactive, interactive methods toward proactive and comprehensive crisis management strategies [2]. Crises, defined as sudden disruptions that threaten organizational functioning, require rapid evaluation, understanding, and decision-making to minimize their impact. They can be characterized as organizational threats that emerge abruptly and demand immediate strategic action, often necessitating the reformulation of organizational strategies [12, 17].

Organizations typically adopt either a response-based or proactive approach to crisis management. The response-based approach addresses crises by relying on existing rules and procedures, with modifications applied only in exceptional circumstances. This method, often followed by academic institutions, emphasizes harmonized application of established guidelines. In contrast, the proactive approach anticipates potential risk factors that could lead to crises and implements preventive measures to reduce their impact. Known as collaborative risk management, this approach requires strategic

foresight, identification of emerging risks, and broad organizational engagement to minimize the potential consequences of a crisis [2, 18].

Evaluating organizational performance during a crisis differs significantly from standard performance assessment, as unique criteria are required to gauge the effectiveness of mitigating the crisis's impact. Emotional reactions accompanying a crisis, such as pessimism, frustration, or mistrust, can be destructive, emphasizing the need for heightened internal and external cooperation. Responses to crises can be viewed from two perspectives: an internal perspective that focuses on managerial efforts to develop strategic solutions and mitigate impacts, and an external perspective that emphasizes aligning strategies with stakeholders' perceptions, which may sometimes lead to overstating performance. To ensure effective crisis management, integration of both perspectives before and during the crisis is essential, fostering convergence between managerial actions and stakeholder expectations. Crisis response strategies are most effective when internal and external efforts are coordinated to address the root causes of the crisis [19-22].

Several scholars have attempted to classify types of crises and corresponding response strategies. Bradford and Garrett [23] identified four crisis types with tailored strategic responses: Commission Situations paired with Denial Strategy, Control Situations with Excuse Strategy, Standards Situations with Justification Strategy, and Agreement Situations with Concession Strategy. Other researchers expanded these classifications, proposing corrective or bolstering strategies to address diverse crises [19, 23]. Among the prominent models for strategic crisis orientation is the Situational Crisis Communication Theory (SCCT), which rests on three core pillars. First, it emphasizes the provision of instructive information, including the nature of the crisis, stakeholder protective measures, and organizational actions to safeguard its interests. Second, it outlines basic crisis response options: denying the crisis, minimizing its perceived impact, or cooperating with stakeholders to mitigate damage. Crisis managers must align the perceived severity of the crisis with the strategic response to optimize outcomes [24].

For this study, the model proposed by Sambir, Michael Wang, and Kel was adopted to guide the establishment of appropriate crisis management strategies. This framework encompasses three stages: the Looking Forward Stage, which examines organizational opportunities and threats; the Looking Into Stage, which evaluates internal operations; and the Looking Around Stage, which observes the external environment and competitors [25].

Strategic orientation has become increasingly critical in uncertain and unpredictable economic environments, highlighting the need for organizations to continuously monitor internal and external strengths, adapt to changing circumstances, and integrate lessons from crises into their strategic planning [12]. Organizational strategies directly influence post-crisis responses, as the initial reaction to a crisis shapes its economic, technical, and reputational consequences. While much prior research focused on communication strategies to preserve organizational reputation, effective crisis management must also address operational performance and objective achievement. Flexibility within the organizational strategy enhances the range of options available for developing crisis response plans, ensuring realistic and logically coherent alternatives for managers [24].

Strategic management planning begins with analyzing the organizational environment and resources while maintaining alignment with the institution's vision and mission. The vision represents the desired future state, whereas the mission defines the organization's purpose and raison d'être. Integration and alignment of these elements across pre-, during-, and post-crisis phases are essential to effective crisis response [13]. Scholars have further refined the concept of strategic orientation; for instance, Miles and Snow [26] categorized organizations into four strategic types—Defenders, Prospectors, Analyzers, and Reactors—and proposed a triple-scale measurement of strategic dimensions, including Defensiveness, Risk Aversion, Aggressiveness, Proactiveness, Analysis, and Futurity [26, 27].

Kaizen, on the other hand, represents a philosophical approach emphasizing systematic work and continuous analysis to foster innovation. This strategy prioritizes ongoing improvement across all aspects of the organization, with enhancements being gradual yet consistent, targeting the organization's most critical areas. Additionally, Kaizen encourages an interactive and collaborative environment through teamwork. For the purposes of this study, the organizational strategy variable is conceptualized according to the core principles of the Japanese Kaizen philosophy, which include attention to customers, focus on teamwork, quality improvement, and technology ergonomics [28, 29].

Based on the literature and prior studies, this research proposes four main hypotheses, with additional sub-hypotheses derived from these overarching propositions, which will be discussed in the analysis of results section. The first hypothesis posits that organizational strategic orientation has a statistically significant effect on crisis management strategies, specifically in response to the Covid-19 pandemic (H1). The second hypothesis asserts that organizational strategic orientation significantly influences organizational culture (H2). The third hypothesis suggests that organizational culture has a statistically significant impact on crisis management strategies (H3). Finally, the fourth hypothesis proposes that organizational culture mediates the relationship between organizational strategic orientation and crisis management strategies (H4).

The conceptual framework of this study is depicted in **Figure 1**, illustrating the mediating role of organizational culture in the relationship between organizational strategic orientation and crisis management strategies (Covid-19) within private Jordanian universities.

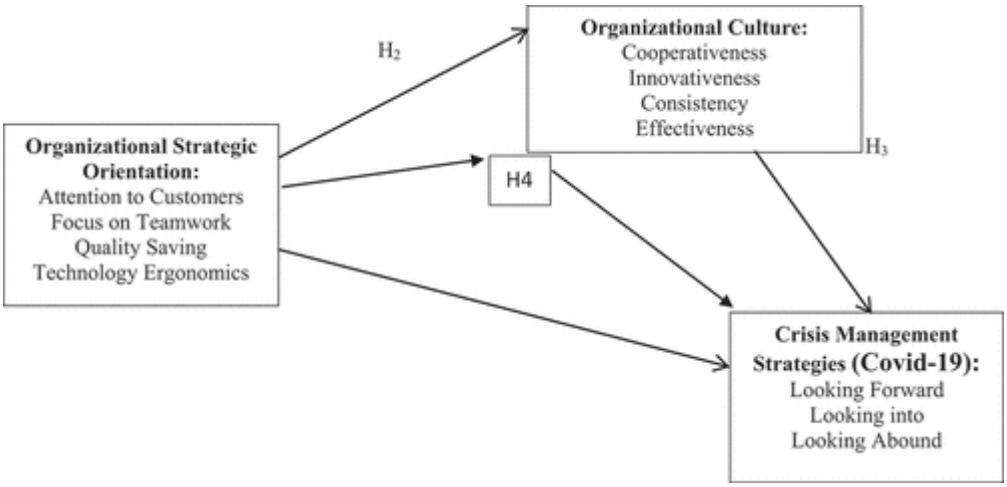

Figure 1. Conceptual framework

Methodology

Data

This study employed a descriptive research design with a quantitative approach. The population consisted of students from private universities in Jordan. In research terms, a sample refers to the subset of individuals from whom data is collected, whereas the population represents the broader group to which the findings are intended to generalize [30]. According to Rahi [31], an appropriately selected sample facilitates accurate inferences and allows the generalization of findings to the population under study. Accordingly, this research targeted a sample of 384 students.

The questionnaire was structured into four sections, with items adapted and modified from prior research. Organizational Strategic Orientation was measured through four dimensions: attention to customers, focus on teamwork, quality saving, and technology ergonomics, drawing on Felmban and Alsharief [28] and Vieira *et al.* [29]. Organizational Culture was measured using cooperativeness, innovativeness, consistency, and effectiveness, based on Chang and Lin [16]. Crisis Management Strategies were operationalized through looking forward, looking into, and looking around, following Wardman [25].

Data analysis technique

Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to analyze the survey data. Prior to analysis, a data screening procedure was conducted to ensure sufficient representation. The collected data were analyzed using SmartPLS 3.0 to evaluate model fit and test the research hypotheses. PLS-SEM is particularly suitable for assessing causal relationships among latent constructs.

PLS-SEM integrates analysis of measurement models and structural models. The measurement model relates observed indicators to latent variables, while the structural model specifies relationships among latent constructs. This study implemented a reflective-reflective Type I higher-order model, in which lower-order constructs are reflective measures themselves but are interrelated, forming a higher-order latent factor. This approach, also referred to as the "organizational common factor model" [32], is appropriate for identifying the shared variance across multiple related reflective constructs.

Results

Findings of the study

Out of 384 distributed questionnaires, 250 valid responses were received, representing a 65.1% response rate. The results were analyzed in line with the study objectives, utilizing the structural equation modeling (SEM) approach. Missing data were minimal and addressed through median imputation for each measurement item. Outlier analysis was conducted using histograms, box plots, and standardized z-scores, with values exceeding ±4 considered outliers and handled according to Hair *et al.* [33].

Measurement model

Reliability was assessed using internal consistency through composite reliability (CR). As shown in **Table 1**, all constructs demonstrated CR values above 0.6, indicating acceptable reliability [34]. Even when individual indicator loadings were below

0.7, the constructs were retained because the composite reliability and average variance extracted (AVE) met the recommended thresholds, confirming measurement suitability. Convergent validity was evaluated through AVE, with all values exceeding 0.5 **(Table 1)**. Discriminant validity was assessed using the Fornell-Larcker criterion, which requires that the square root of the AVE for each construct exceed its correlations with other constructs. The results confirmed adequate discriminant validity across all latent variables **(Table 2)**.

Table 1. Internal consistency reliability of the measurement model

Constructs	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	0.94	0.941	0.947	0.545

Table 2. Fornell-Larcker criterion analysis to check discriminant validity

	Crisis Management	Organizational Culture	Strategic Orientation
Crisis Management Strategies	**0.734**		
Organizational Culture	0.609	**0.742**	
Organizational Strategic Orientation	0.507	0.682	**0.738**

Common method bias

To examine whether common method bias (CMB) might have influenced the results, both Harman's single-factor test and a common latent factor (CLF) analysis were conducted. According to Harman's single-factor test, the largest factor explained 45.37% of the total variance, which is below the conventional 50% threshold, indicating that CMB did not pose a significant issue in this study.

Structural model analysis

Partial Least Squares Structural Equation Modeling (PLS-SEM) does not require data to follow a normal distribution, which can sometimes lead to inflated or deflated t-values and increase the risk of Type I errors. To mitigate this, the bootstrapping method was applied. This involved drawing a large number of resamples (e.g., 5000) with replacement from the original dataset to compute standard errors and derive t-values for assessing the significance of hypothesized relationships.

The first step in SmartPLS SEM is to construct a conceptual model based on theory. In this study, the model included Organizational Strategic Orientation, Organizational Culture, and Crisis Management Strategies (Covid-19). Arrows in the model indicate hypothesized causal relationships, with single-headed arrows representing directional effects among constructs.

Figure 1 presents the structural model with standardized path coefficients and factor loadings for each indicator. The mediating role of Organizational Culture between Organizational Strategic Orientation and Crisis Management Strategies is also illustrated. During the assessment, indicators with factor loadings below the recommended threshold of 0.6 were removed (a5, s1, e5, d1), following Hair *et al.* [34]. **Figure 2** depicts these deleted items and the final refined measurement model.

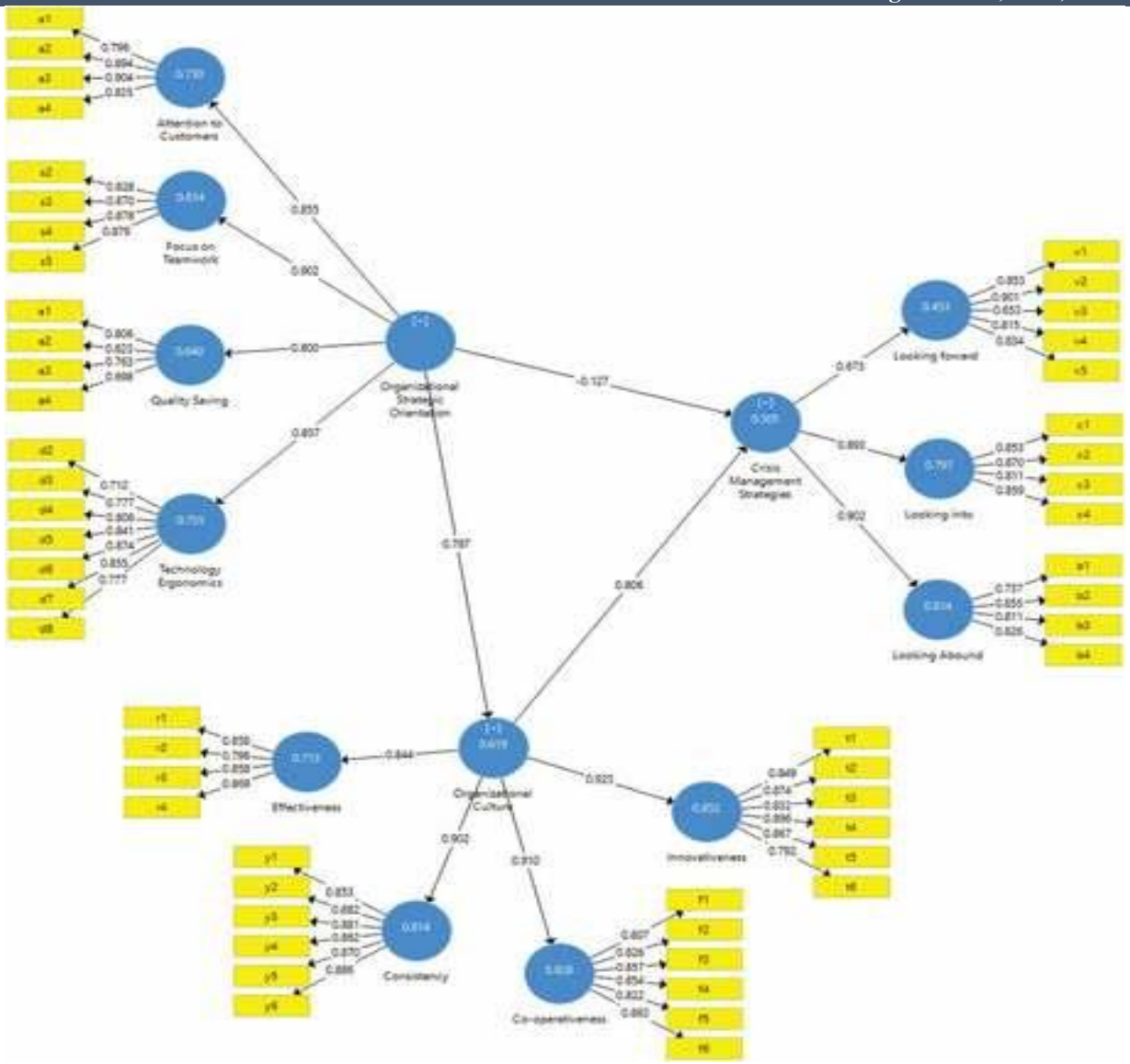

Figure 2. Measurement model of the factor loading

Table 3 summarizes the key outcomes from the SmartPLS Structural Equation Modeling analysis, reporting path coefficients, standard deviations (STDEV), and significance levels (p-values). The results indicate that Organizational Strategic Orientation negatively influences Crisis Management Strategies (Covid-19) in private Jordanian universities. In practical terms, for every 1% increase in strategic orientation, crisis management strategies decreased by 0.127 units, providing support for Hypothesis 1.

Additionally, the findings show that Organizational Strategic Orientation positively affects Organizational Culture. Specifically, a 1% rise in strategic orientation corresponded to a 0.787 increase in the level of organizational culture, thereby confirming Hypothesis 2. Organizational Culture also demonstrated a positive and significant relationship with Crisis Management Strategies, with a 1% improvement in culture linked to a 0.806 increase in crisis management initiatives. These results highlight the crucial role of organizational culture as a mediator, amplifying the impact of strategic orientation on crisis response. **Figure 3** illustrates the structural model, showing the standardized path coefficients and the interplay between Organizational Strategic Orientation, Organizational Culture, and Crisis Management Strategies (Covid-19).

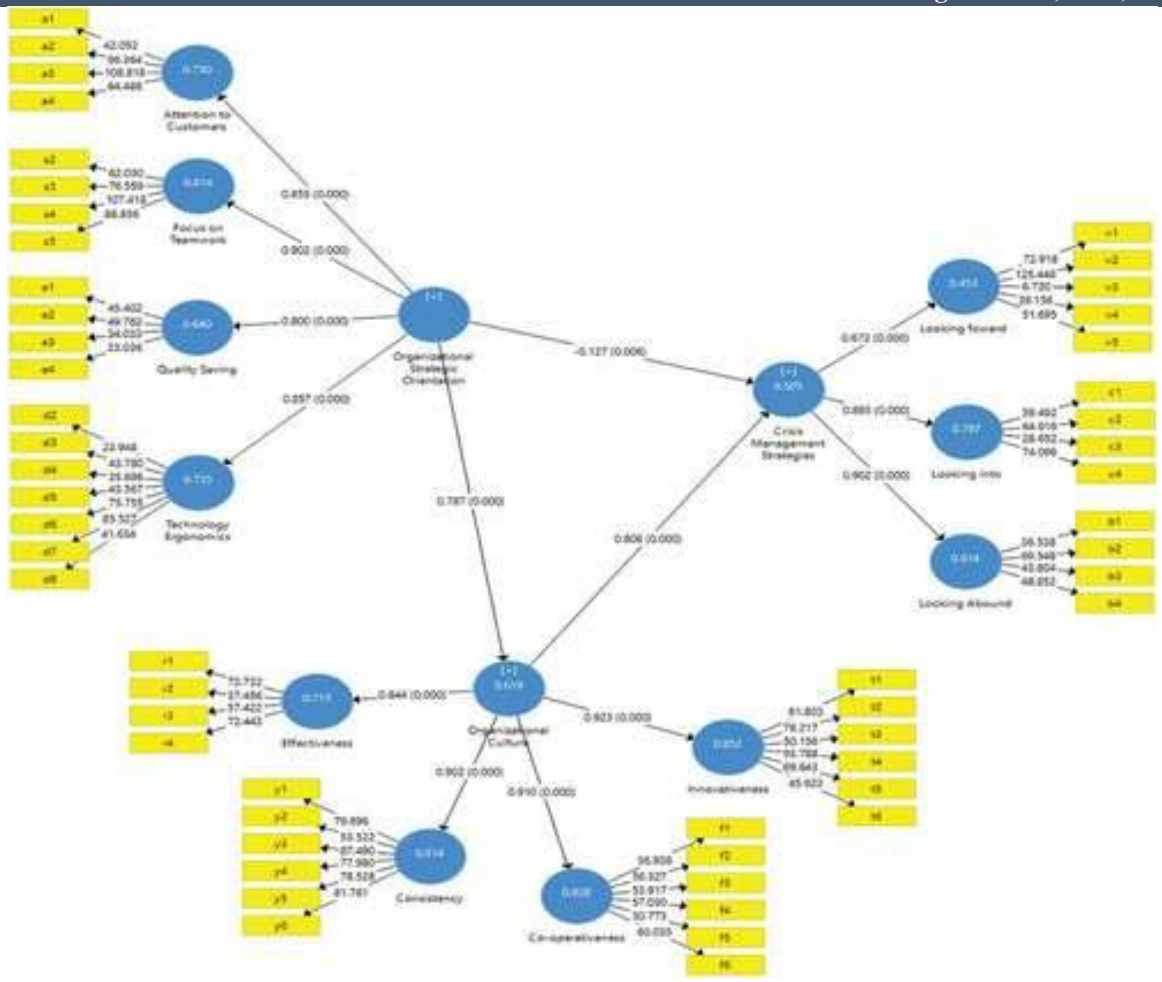

Figure 3. SmartPLS standardized result

Table 3. The Assessment for Harman's One Factor Solution

Total Variance Explained						
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 values indicate the extent to which the independent variables account for the variance observed in the dependent variables. As shown in **Table 4**, the predictors of Crisis Management Strategies (Covid-19) explain approximately 50.5% of its variance, leaving the remaining 49.5% attributable to unexplained or error variance. Similarly, **Table 5** shows that the predictors of Organizational Culture account for 61.9% of its variance, implying that roughly 38.1% of the variance remains unexplained. The effect size (f^2) for all exogenous latent constructs in the model is considered substantial. In addition, the predictive relevance (Q^2) of the exogenous constructs is small in the current study. According to Sarstedt *et al.* [35], Q^2 values of 0.02, 0.15, and 0.35 are interpreted as small, medium, and large predictive relevance, respectively, for a given endogenous construct.

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 the R^2

	R^2	f^2	Q^2

Crisis Management Strategies	0.505	0.059	0.182
Organizational Culture	0.619		

Mediation analysis

Indirect effects approach

To examine the mediating role of Organizational Culture, this study adopted the procedures outlined by Preacher and Hayes [36]. The bootstrapping technique was employed to estimate the indirect effects and assess mediation. According to Preacher and Hayes (2008), a mediating effect is considered significant if the 95% bootstrap confidence interval (CI: LL–UL) does not include zero. The results of the mediation analysis are summarized in **Table 6**.

Table 6. Indirect effect

	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

The findings from the bootstrap analysis, presented in **Table 6**, demonstrate that Organizational Culture significantly mediates the relationship between Organizational Strategic Orientation and Crisis Management Strategies (Covid-19). Specifically, the indirect effect (β = 0.634, t = 15.752) was statistically significant at the 0.01 level. The 95% bootstrap confidence interval (LL = 0.209, UL = 0.392) did not include zero, confirming the presence of a mediating effect. This indicates that higher levels of Organizational Strategic Orientation positively influence Crisis Management Strategies through the enhancement of Organizational Culture, thereby supporting hypothesis H4.

Regarding model validation, the Goodness of Fit (GoF) index was applied to evaluate the overall performance of the combined measurement and structural models. The calculated GoF value of 0.521 exceeds the recommended threshold of 0.36, suggesting that the proposed model demonstrates a strong overall fit and is suitable for interpreting the relationships among the study constructs.

$$= \sqrt{AVE \times R^2} = \sqrt{0.539 \times 0.505} = \sqrt{0.272} = 0.521 \quad (1)$$

Conclusions and Recommendations

Based on the statistical analysis conducted in this study, several key conclusions and recommendations can be drawn:

1. The findings indicate a positive relationship between the dimensions of organizational culture—specifically cultural innovativeness, cultural consistency, and cultural effectiveness—and organizational strategy. Among these, cultural innovativeness had the strongest influence, followed by cultural effectiveness and cultural consistency. Interestingly, cultural cooperativeness did not appear to significantly affect organizational strategy. Consequently, it is recommended that private universities prioritize fostering cultural innovativeness to support the implementation of strategic initiatives, which in turn can enhance their capacity to manage crises, such as the Covid-19 pandemic.

2. Organizational culture was also positively associated with crisis management strategies. Cultural innovativeness had the greatest impact, followed by cultural cooperativeness, cultural consistency, and cultural effectiveness. To mitigate the effects of crises effectively, private university administrations should focus on enhancing cultural innovativeness, as this dimension appears most influential in shaping crisis response strategies.

3. The analysis confirmed a positive relationship between the dimensions of crisis management strategies and organizational strategy. Notably, the "Overlooking the Crisis" strategy had the largest negative effect, indicating that ignoring emerging crises weakens universities' capacity to manage crises such as Covid-19. Other strategies, such as "Studying the Crisis," "Mistake Identification," and "Concerning Future Aspirations," showed progressively smaller effects.

4. The study suggests that private universities largely adopted an innovative cultural approach that aligns with social realities and emphasizes cultural events, but often neglected cultural cooperativeness. As a result, organizational strategies remained somewhat traditional, with crisis strategies initially limited by reluctance to pursue innovation for fear of cultural conflict. Initially, universities tended to overlook the crisis, but as Covid-19 evolved, they gradually shifted toward strategies focused on understanding the crisis, learning from mistakes, and planning for future contingencies.

5. Some universities adapted their strategic concepts during the pandemic, but the response was often delayed, resulting in substantial negative impacts. In contrast, a few institutions proactively developed both cultural and strategic frameworks before the crisis, allowing them to respond more effectively and minimize the adverse effects of Covid-19.

6. The field of crisis management is complex, and results can vary depending on the context. Future research should consider alternative criteria for evaluating variables and examine different organizational sectors to gain a more nuanced understanding of these relationships. Implementing the proposed model across diverse environments can provide a clearer and more comprehensive perspective on the interplay between organizational strategy, culture, and crisis management.

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