

Examining the Impact of Organizational Culture and Risk Management and Internal Control on Performance in Healthcare Organizations

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Abstract

In this volatile and challenging environment, global pandemics, extreme weather events, and the ever-changing global political and economic landscape continue to have a significant impact on the sustainability of organizations. This study presents a framework for measuring or assessing the nature of organizational culture and whether it is effective in influencing the competitive advantage of healthcare organizations in terms of operational performance through risk management and internal control. The results of the study demonstrate that effective consideration of the interaction of risk management and control systems with organizational culture is one of the best ways to prevent operational failure.

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1. Introduction

Operational entities, including corporations, governments, and non-profit entities, face environmental, social, and governance (ESG)-related risks that can impact their profitability, success, and even survival. Given the unique impact and dependencies of ESG-related risks, COSO and WBCSD worked together in October 2018 to develop guidance to help these entities better understand the full scope of these risks so that they can effectively manage and expose them. The COSO ERM framework defines ERM as "the culture, capabilities and practices of an organization that rely on risk management to create, preserve and realize value, integrated with strategy setting and performance CFA (2017).

In 2007, COSO published an updated version of the Enterprise Risk Management Framework after comprehensive professional research and analysis. The framework has been improved in view of the deficiencies and inconsistencies between the previous version and the analysis of the real development of the enterprise, and at the same time, it has comprehensively integrated the current management and control status as well as the characteristics of different enterprises in recent years, and has further elaborated new meanings of risk management, in which the starting point of this version of the risk management framework is the enterprise's vision, development objectives and the enterprise's value concepts, and at the same time, it emphasizes on reasonable analysis of the enterprise's risks. At the same time, it emphasizes on the reasonable analysis of enterprise risk, research and attention, and its penetration into the business activities and core development values of the enterprise in the process of enterprise development.

The COSO ERM framework defines culture as "the attitudes, behaviors, and understanding of risk, whether positive or negative, that influence the decisions of management and personnel and reflect the organization's mission, vision, and core values." Together, mission, vision, core values, and strategy describe why the entity exists, who it represents, what it is expected to do, and how it is expected to do it (COSO ,2017). These elements provide observation and motivation and point the way forward as the organization grows and achieves its goals. Therefore, incorporating ESG elements into the mission, vision, and core values may help foster a culture that exhibits 'ESG-aware' behaviors and decisions.

Risk management has to be aligned with corporate strategy, so it is important to mention the importance of risk governance and culture in the enterprise. Risk governance determines the tone of enterprise development and risk resistance, while corporate culture is related to the social responsibility of the enterprise and the moral commitment of employees. Risk management not only requires various effective risk governance and response measures, which determines the external risk response and resolution ability of the enterprise, but also requires the risk culture to strengthen the correct risk awareness within the enterprise and the cultural penetration of the enterprise's good solidarity to deal with the risk, the combination of which is an important guarantee and prerequisite for the enterprise's risk management.

Observing successful organizations in the past, almost all of them have their own unique organizational capital, organizational culture and leadership style. Zheng et al. (2010) concluded that most managers affirm that a strong organizational culture is important for business development, but they also believe that the biggest obstacles to development are management capabilities and appropriate approaches. Successful companies can leverage organizational culture and corporate vision to grow exponentially and become a competitive weapon for the company. Organizational culture influences how members feel, think and act. When an organization's culture evolves in a positive direction, members are better able to think positively. This not only facilitates communication between internal and external customers, but also reduces the occurrence of customer complaints and disputes.

With the globalization of the economy, companies are faced with a complex and demanding market environment and a risky business environment, and it is especially important to eliminate business risks in the initial state. The establishment and implementation of internal control systems in medical institutions are also increasingly important. Three scholars, Wyszewianski, Thomas and Friedman (1987) believe that medical institutions must also rely on formal control systems to obtain good cost efficiency, quality of care, and profitability. They divided hospital management control into two categories: efficiency control and quality control.

The existence of a link between organizational culture and internal control is discussed has been proposed from Pfister (2009) to Andersen and Lueg (2016). Caratas and Spatariu (2013) also state that in order to maximize organizational profitability, internal control should be "matched" to organizational culture. Lu and Wenchang (2015) emphasize the view that it contributes to the sustainability of the organization. Hospitals value a safe healthcare environment for patients, and organizational culture is a key factor in a healthcare organization's struggle with patient safety, and Gamboa Poveda et al. (2016) suggest that it mediates between organizational culture and internal control. Hernandez et al. (2016) limited their research to the small business level, and they also proposed that internal control is a necessary but not sufficient condition for good corporate management, performance measurement, and profit growth.

Nasrum (2018) it is stated that corporate governance principles are based on a high level of integrity and therefore require a code of conduct to be part of the organizational culture. Companies with an ethical culture grow sustainably and are able to be a social and environmental force (Taylor, 2017). In order to explore the possible impact patterns of safety management from the characteristics of organizational culture, this study will focus on the healthcare industry where the safety risk is high.

2. Literature Review

2.1 Organizational Culture

The concept of "culture" has deep roots in the anthropological literature, dating back to Mannheim in 1922. Teehanke (1994) points out that first Margulies (1969) and Beckhard (1969) and Schein (1968) used the term "organizational socialization", but it can be said that the definition given is close to the definition of organizational culture. Smircich (1983) states that organizational culture is derived from anthropology and to a lesser extent from sociology; Schein (1992) states that organizational culture is a set of fundamental assumptions, assessments, and corrections created, discovered, or developed in providing solutions to internal and external responses.

Wallach (1983) explores the division of organizational cultures. Organizational culture is also a proof of competitiveness and a source of corporate strategy. To gain a competitive advantage in the marketplace, organizations must develop a learning culture (Hult et al., 2003). Brian and Pattarawan (2003) identified four important aspects of organizational culture: "risk", "reward", "warmth", and "support". According to Frances and Morriss (2020), employee engagement comes from the company's corporate culture, which describes the true work style of the company. That is, the only thing leaders really do that matters is to create and manage the company's corporate culture.

A major concern of managers is the impact of organizational culture on organizational performance. Benjamin (1990) proposed a relational model in which social and organizational culture, organizational management processes, work attitudes and organizational effectiveness are concerned. Kotter and Heskitt (1992) the key factor in predicting the success or failure of an organization over the next 10 years may be determined by its culture. Denison (2000) studied how leaders, managers, and employees can navigate organizational culture to improve organizational effectiveness. Lau and Ngo (2004) demonstrated the role of culture in coordinating between human resource systems and product innovation.

The role of organizational culture in improving hospital performance has generated a high level of interest among healthcare organizations and academics. Lim (1995) states that organizational culture can foster a motivated and well-coordinated workforce. Schein (1996) stated that organizational culture plays a key role in process improvement. The development of Lean and Six Sigma has been identified as one of the most important factors for successful management (Patyal & Koilakuntla, 2015) and healthcare performance improvement (Scott et al., 2003). empirical measurements of organizational culture in Cameron's (2008) study, can improve organizational performance.

Organizational culture research has taken a new direction, and there has been widespread interest in its application to organizational effectiveness measurement and organizational development, as well as in improving organizational culture through organizational measurement and using organizational culture to enhance organizational effectiveness. Based on the qualitative and empirical studies in these

literatures and the discussion in the successful resource model, this study proposes the following hypotheses:

H1: Organizational culture affects business performance.

2.2 Risk Management

Risk is a choice, not a destiny. Risk management is the management of options (active or passive risks) with limited resources and means available. Disasters and crises have changed the concept of managing risk, and in addition, risks arising from work management and socio-cultural differences have also received attention from scholars. However, it is also due to the deeper socio-cultural exploration of risk that the concepts of "objective entity" and "subjective constructivism" have been developed, the main difference being the definition of "risk". Businesses are exposed to many risks that can threaten their business objectives, and the business environment in which they operate has become more dangerous.

With the advent of technology and globalization, the fact that many large multinational companies have failed in the past few years suggests that poor risk management and internal controls are among the causes of this event (Yazid et al., 2012). Lerbinger (1997) states that a crisis is defined as an event that threatens the future growth or survival of an enterprise. Lam (2000) states that enterprise risk management has become a management technique and a standard. Zheng (2016) risk is objective, pervasive, harmful, inevitable and changeable. Wang and Xu (2018) pointed out that risks including financial management, human resources, and hospital reputation may occur in hospitals.

Broder and Tucker (2011) argue that risk has uncertainty of outcome between actual and expected. Yang (2011) argues that risk management can measure the causes and effects of undesirable processes. Risk assessment includes the outcome of the risk and the likelihood of occurrence (Wu, 2017). The most important feature of risk management is the thorough examination and review of healthcare operational processes to avoid abnormal events and to help healthcare managers prioritize problems as they are encountered. Alternatively, new forms of governance oversight are implemented to enhance controls, knowledge use, and corporate responsibility (Carter et al., 2019; Lai et al., 2019).

All risk-related activities in a medical institution must be managed carefully and appropriately, because the work of a hospital has many potential risks and can lead to a crisis at any time. 2019 WHO calls for patient safety to be a priority in health management sector policy and planning. Thus, the risk management goals for hospitals are to (1) minimize the chance of events that could cause harm to patients, staff, and facilities; (2) minimize deaths of patients, staff, and others resulting from the provision of services or risk of disease; (3) improve patient outcomes; (4) effectively manage and protect resources; and (5) comply with regulations to ensure institutional continuity. COVID-19 Virus The importance of risk management is underscored by the continued spread of the outbreak.

Levy et al. (2010) define a risk culture as "the behavioral norms of individuals and groups within an organization that determine the collective ability to face risk, leading to superior organizational performance", and Shahzad et al. (2012) also state that it has a significant impact on job performance. Fraser and Henry (2007) conducted an in-depth study on whether corporate governance approach through risk management can improve organizational performance and return on equity. However, evidence from various studies suggests that many organizations lack enterprise risk management practices.

Enterprise risk management influences the processes that apply to the strategic environment and the entire enterprise and also has the potential to identify the impact on the main event. Beasley et al. (2009) enterprise risk management is an effective approach. Fong and Samad (2011) risk is an important component of corporate governance. In response to rapid changes in the environment, enterprise risk management has attracted worldwide attention (COSO, 2004). In addition organizations that adopt a more integrated approach to managing enterprise-wide risk experience significant benefits associated with business performance (Gordon et al., 2009).

Organizational culture is powerful in that it will guide the organization in the right way for each individual. Thus, organizational culture provides a powerful and useful tool for guiding each individual's daily behavior, and culture will change the concept of safety and the way in which it interacts with new members. Cooper (1998) states that safety culture implicitly guides the personal, work, and organizational characteristics that affect the safety and soundness of an organization and is part of the organizational culture. Cooper (2000) further specifies that in both In the relationship between culture, organizational culture is often used to outline corporate values, and a cross-section of organizational culture is safety culture, which has a relevant impact on the safety performance of the organization. Based on the qualitative and empirical studies in these literatures and the discussion in the successful resource model, this study proposes the following hypotheses:

H2: Organizational culture has a positive impact on risk management.

H3: Risk management will have a significant positive impact on operating performance.

H4: Risk management will mediate the positive effect of organizational culture on business performance.

2.3 Internal Control

The concept of internal control emerged as a practice in the early 20th century and became widely used in the economic literature after the 1950s (Hay, 1993). 1992 COSO Committee issued a report on internal control structure, an important developer of modern internal control theory, and in 1994 a supplement to the report was issued, collectively referred to as the COSO report. Internal controls are governance processes that are planned and approved for implementation by

management and employees must comply with the internal controls established (Njagi, 2018). A sound internal control system ensures that the influence of the corporate structure and the mindset of management and employees are embedded. It is the organization's "sense of control" (Herz et al., 2017).

The 1992 and 1994 COSO reports identified four objectives and five components of internal control. In this, Schein (1996) states that the control environment is a combination of factors that shape the organizational culture and influence the sense of control of organizational members, as well as the rights and responsibilities policies for human resource allocation. Mulyadi (2016) states that the internal control system includes policies for maintaining the organization's assets, accounting inspection accuracy and data reliability, encourage compliance with management policies. Corporate governance issues emphasize the management philosophy and style of managers, and organizational culture should be an important factor influencing the effectiveness of the organization's internal control implementation.

Hospitals are forced to pursue excellence in management and effective governance due to the internal audit process (Koutoupis & Pappa, 2018). Hospital internal control systems are established in a risk-oriented manner; non-critical risks can be appropriately simplified, but critical risks require carefully constructed systems, procedures, and control steps. Risk assessment involves identifying and analyzing risks inside and outside the hospital and developing risk response strategies.

Taylor (1911) and Fayol (1916) have formally introduced the concept of "control", and Henri Fayol even considered "control" as one of the five management functions. Willis (2000) believes that it is good corporate governance practice to provide reports and that the reporting of internal control information is beneficial to increase the value of the company and that the disclosure of good internal control information is positively correlated to the value of the company's stock. Ashbaugh (2009) also found that internal control is higher in companies with existential deficiencies, idiosyncrasy, systemic risk and cost of equity capital. Hogan (2008) on the other hand, found that the more serious the internal control problems, the higher the audit costs. Enterprise internal control is the control of the overall risk in the development of the enterprise, which occurs at different stages of the development of various types of enterprises, at different times.

Susanto (2017) states that internal control is needed to generate the accounting information required by management. Schandl and Foster (2019) study continuous monitoring can provide better support for assessing internal control. Arens et al. (2014) study concluded that internal control can play a supervisory role in GCG its implementation. Therefore, it is necessary for the company to develop behavioral standards as part of the organizational culture for all employees to work as a reference of values and business ethics (Nasrum, 2018).

Companies with culture will achieve more sustainable growth (Taylor, 2017). Manossoh (2016) examines the need for a balance of both internal and external aspects in good corporate governance, where organizational culture influences individual or collective performance improvement. Yanka and Fardinal (2021)

study illustrates that internal control variables have a significant impact on accounting information systems. Based on the qualitative research, empirical research and the discussion in the successful resource model in these literatures, this study proposes the following hypothesis:

H5: Organizational culture has a significant positive impact on internal control.

H6: Internal control has a significant positive impact on operational performance.

H7: Internal control mediates the positive effect of organizational culture on business performance.

The study framework is shown in Figure 1 and illustrates the hypothetical relationships between the various variables identified from the above literature.

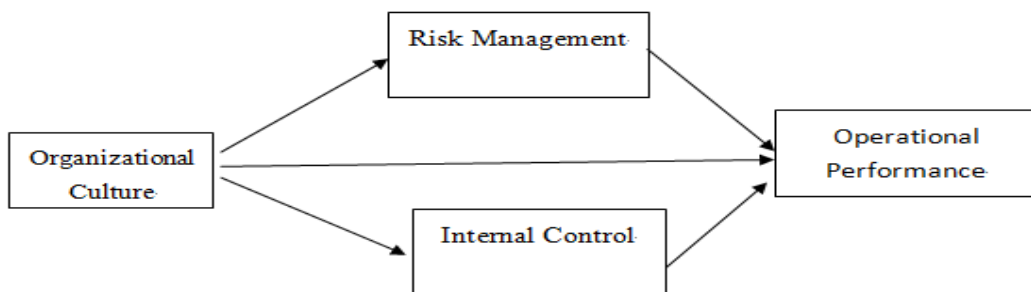


Figure 1: Conceptual framework

3. Research Methodology

3.1 Measurement Instrument

The hospital that is the focus of this study has an organizational culture that will have a significant impact on risk management, internal control, and operational performance. The scales examined in the study were developed through the use of academically accepted sources, they were used in relevant prior research, and consisted of survey questions with validity and reliability recognized.

Immediately after the initial questionnaire was developed, an opinion survey was conducted with experts to confirm content validity, and six advanced experts, including corporate management and medical practice executives, were invited to evaluate the content of the initial draft of the questionnaire, in terms of appropriateness of item meaning, clarity of text, and elaboration of variable items, as well as other aspects of the entire questionnaire. This project provided valuable suggestions for additions and modifications to the expert validity of the study questionnaire.

The Organizational Culture Scale (OCS) is a measure of a hospital's perceptions and values of organizational culture, and its ability to address internal and external issues, which will be integrated and developed into a set of behavioral norms. Based

on the literature, the four perspectives of "risk, reward, warmth, and support" proposed by Brian and Pattarawan (2003) were used as the measurement components. Questions 4, 10, and 13 of the scale were reverse coded and noted in the questionnaire.

The risk management scale is based on the SCS. Risk management refers to the management process of minimizing risks in an environment where the risks of an enterprise are determined. In this study, the SCS (Safety System) was used as a component to measure the risk management process. In this study, the questionnaire developed by SCS (Pronovost et al., 2003), PSCHO (Singer et al., 2003), and SAQ (Sexton et al., 2004) were used as the base scale scales for constructing this study, and the final questionnaire consisted of 10 questions.

The internal control scale is the management process of an organization to ensure the effectiveness and efficiency of its operations. The referenced literature uses the COSO assessment tool measure as the core, with five items such as "control environment, risk assessment, control operations, information and communication, and supervision" as the construct measurement factors. In this study, the COSO scale was used to select appropriate questions, and with reference to the design of Chiang (2006) and Yi-Ju Sung (2008), the COSO scale was used as the basis of the questionnaire, and the questions were modified into various variables to obtain more information and opinions so that the content validity could reach an acceptable level. The original scale consisted of 28 questions, and after the content validity test by experts, 20 questions were retained according to the experts' suggestions by revising the topics and content of the questions and deleting 8 questions.

The operational performance scale is based on the "financial performance, performance" constructs of Delaney and Huselid (1996), Brian and Pattarawan (2003), and Tippins and Sohi (2003). Because of the importance of performance as it affects the operation and sustainability of the hospital, the definition of operational performance was developed as an indicator to understand operational status and evaluate organizational performance. Delaney and Huselid (1996), Brian and Pattarawan (2003), and Tippins and Sohi (2003) were used to delineate financial and operational performance as a proxy for the overall performance of the organization. After the expert content validity test, the questionnaire was revised according to the expert's suggestions and the text was revised to retain 9 questions. A 5-point Likert-type scale was used, with each of the five measures rated from strongly disagree to strongly agree (1 to 5).

3.2 Sampling

In this study, the questionnaire technique was used as the data collection method. First of all, the sample data of the target population was divided into four categories: physicians, nursing staff, medical technicians, and administrative or other, according to the research needs. The hospital level included regional hospitals, regional (including teaching) hospitals, and medical centers; the hospital distribution included all regions in Taiwan.

Sampling was conducted according to the Krejcie and Morgan (1970) parent group and sample size recommendation tables. A total of 750 questionnaires were distributed, and 677 were collected, with a recovery rate of 90.2%. Among them, there were 661 valid questionnaires and 16 invalid questionnaires, with a usability rate of 97.6%. Regional hospitals collected 291 questionnaires, regional (including teaching) hospitals collected 220 questionnaires, and medical centers collected 166 questionnaires. After data collection the data were summarized and described using SPSS statistics and according to the descriptive analysis the sample was a group of middle-aged (mean 32.55 years) and educated people. Since they had a basic understanding of the research concepts, it was considered that this sampling would have a positive impact on the accuracy of our study. Some descriptive results are given in Table 1 below.

Table 1: Descriptive statistics of the sample

Category	Variable structure	Number of people	Percentage
Gender	Male	103	15.6 %
	Female	558	84.4 %
Age	under 30	121	18.3 %
	31 to 40 years old	210	31.8 %
	41 to 50 years old	220	33.3 %
	51+	110	16.6 %
Education level	Below high school level	32	4.8 %
	Specialized	240	36.3 %
	University	330	49.9 %
	Research Institute or above	59	8.9 %
Years of service	Less than 5 years	218	33.0 %
	6 to 10 years	127	19.2 %
	11 to 20 years	216	32.7 %
	21 years or more	100	15.1 %
Hold a position	Physicians	29	4.4 %
	Nursing Staff	336	50.8 %
	Medical Technicians	123	18.6 %
	Administrative or other	173	26.2 %
Job category	Mid-level or above supervisor	16	2.4 %
	Supervisor	112	16.9 %
	General Staff	533	80.6 %
Hospital level	Regional Hospitals	285	43.1 %
	Regional hospitals	215	32.5 %
	Medical Center	161	24.4 %
Year of Hospital Establishment	Before 1971	300	45.4 %
	1972~1981	51	7.7 %
	1982~1991	128	19.4 %
	After 1992	182	27.5 %

3.3 Scale Validity and Reliability

Stratified factor analysis was performed on the Organizational Culture scale, and the KMO value after the test was 0.766, and the Bartlett spherical test was significant (approximate chi-square distribution value of 1949.776, with a degree of freedom of 78), making it suitable for factor analysis. After passing the KMO and Bartlett's spherical test, stratified factor analysis was performed on the "organizational culture" construct, and the analysis factor loadings ranged from 0.831 to 0.945, with an eigenvalue of 1.06, explaining 88.38% of the total variance. The "Risk Management" scale was tested for stratified factor analysis with a KMO value of 0.812 and a significant Bartlett's spherical test (approximate chi-squared value of 1546.383 with 45 degrees of freedom), which is suitable for factor analysis. After passing the KMO and Bartlett's spherical test, a hierarchical factor analysis was conducted on the "risk management" construct with factor loadings ranging from 0.649 to 0.906, an eigenvalue of 1.17, and a total explained variance of 79.72%. The Internal Control scale was tested for factor analysis with a KMO value of 0.690 and a significant Bartlett's spherical test (approximate chi-squared value of 3408.812 with 105 degrees of freedom). After passing the KMO and Bartlett's spherical test, a stratified factor analysis was performed on the "Internal Control" framework, and one factor was analyzed with factor negatives ranging from 0.691 to 0.935, with an eigenvalue of 1.08, explaining 78.49% of the total variance.

Stratified factor analysis was performed for the Operating Performance Scale, and the examined KMO value was 0.645, and Bartlett's spherical test reached a significant level (approximate chi-square distribution value of 986.593 and degree of freedom of 36), making it suitable for factor analysis. After passing the KMO value and Bartlett's spherical check, the analysis of the "business performance" construct through stratified factors yielded a factor analysis with factor loadings between 0.624 and 0.968, an eigenvalue of 1.02, and an explanation of 81.05% of the total variance.

The above scale for use in this study had good validity for all constructs based on the results of the stratified factor analysis.

The statistical analysis software of confirmatory factor analysis (CFA) was used to measure the convergent validity and the discriminant validity of the model, and to verify the relationship between the variables, to measure the fitness index criteria in the model by using confirmatory factor analysis, and to examine the fitness of the structural model, as well as to carry out the reliability and validity tests through confirmatory factor analysis.

Organizational Culture Measurement Model: (CFA) analyses were conducted on 13 factor analyses for 4 factors, namely, "Risk", "Reward", "Warmth", and "Support". Table 2 shows the results of the CFA and the correlation matrix.

Table 2: Organizational Culture Model Distributional Validity Analysis and Correlation Matrix

	Risk	Reward	Warmth	Support
Risk	0.889			
Reward	0.691	0.665		
Warmth	0.626	0.412	0.868	
Support	0.790	0.674	0.664	0.812

According to the fitness index measurement model, the four potential variables of "Risk", "Reward", "Warmth" and "Support" were estimated, and the results obtained were $\chi^2 = 868.599$, $df = 59$, $RMSEA = .263$, $p = .000$, and the results of the table measurement model showed that some of the values reached the fitness criterion, and the measurement model was still acceptable.

Risk Management Measurement Model: A total of 10 analytical items were analyzed (CFA) for three factors, namely, "audit management", "safety system", and "accident investigation management". Table 3 shows the results of the CFA and the associated matrix.

Table 3: Risk Management Model Compartmental Validity Analysis and Correlation Matrix

	Audit management	Safety system	Accident investigation management
Audit management	0.914		
Safety system	0.925	0.855	
Accident investigation management	0.785	0.746	0.891

Based on the fitness index measurement model analysis, the three potential variables of "audit management", "safety system" and "accident investigation management" were estimated, and the results obtained were $\chi^2 = 569.617$, $df = 32$, $RMSEA = .291$, and $p = .000$, which indicated that some of the values reached the fitness criterion, and the measurement model was acceptable.

Internal Control Measurement Model: A total of 20 items were analyzed (CFA) for five factors, namely, "control environment", "risk assessment", "control operations", "information and communication", and "supervision". Table 4 shows the results of the CFA and the associated matrix.

Table 4: Regional validity analysis and correlation matrix of the internal control model

	Control environment	Risk assessment	Control operations	Information and communication	Supervision
Control environment	0.870				
Risk assessment	0.876	0.848			
Control operations	0.897	0.935	0.878		
Information and communication	0.866	0.928	0.923	0.797	
Supervision	0.896	0.867	0.865	0.914	0.841

Based on the fitness index measurement model analysis, the five potential variables of "control environment", "risk assessment", "control operations", "information and communication", and "supervision" were estimated, and the results obtained $\chi^2 = 3549.680$, $df = 160$, $RMSEA = .326$, and $p = .000$, which indicated that some of the values of the results reached the fitness criterion, and the measurement model was still acceptable.

Business Performance Measurement Model: (CFA) analyses were conducted on nine analytical items for two factors, namely, "financial performance" and "job performance". Table 5 shows the results of the CFA and the correlation matrix.

Table 5: Operating Performance Model Segmental Validity Analysis and Correlation Matrix

	Financial Performance	Job Performance
Financial Performance	0.908	
Job Performance	0.748	0.798

Based on the fitness index measurement model analysis, the two potential variables of "financial performance" and "job performance" were estimated, and the results obtained were $\chi^2 = 639.615$, $df = 26$, $RMSEA = .344$, and $p = .000$, which indicated that some of the values of the results reached the fitness criterion, and the measurement model was acceptable.

4. Findings and Discussion

The correlation analysis was conducted on organizational culture and risk management, organizational culture and internal control, organizational culture and operating performance, internal control and risk management, internal control and operating performance, and risk management and operating performance, and the results of the analysis are shown in Table 6.

Table 6: Correlation Analysis

	Sample statistic			Pearson Correlation			
	N	Mean	Std Dev	1	2	3	4
Organizational culture	661	3.896	0.460	1.00			
Internal control	661	3.884	0.454	0.776**	1.00		
Risk management	661	3.982	0.428	0.620**	0.734**	1.00	
Operational performance	661	3.409	0.566	0.378**	0.516**	0.406**	1.00

** $p < .01$

The important checks of the regression analysis include: significance and explanatory power R^2 to check whether the effect of the independent variables on the dependent variables is significant, and if it is significant ($p < 0.05$), it means that the independent variables have influence on the dependent variables, and the hypothesis is valid. If it is not significant ($p > 0.05$), it means that the independent variable has no influence on the dependent variable in the regression model, and then the hypothesis is not valid. The results of the analysis are shown in Table 7.

Table 7: Regression Analysis

Dependent variable	Independent variable	Unstandardized coefficient		Standardized coefficient	<i>t</i>	<i>p</i>	Explainable variation
		B	Standard error	β			R ²
Operational performance	Constant	1.513	0.175		8.654	0.000	0.159
	Risk	0.174	0.053	0.169	3.276	0.001	
	Reward	0.235	0.062	0.201	3.758	0.000	
	Warmth	-0.007	0.045	-0.008	-0.147	0.883	
	Support	0.094	0.073	0.085	1.286	0.199	
Risk management	Constant	1.775	0.109		16.266	0.000	0.425
	Risk	0.222	0.033	0.285	6.705	0.000	
	Reward	-0.048	0.039	-0.055	-1.241	0.215	
	Warmth	0.032	0.028	0.049	1.132	0.258	
	Support	0.358	0.045	0.430	7.879	0.000	
Operational performance	Constant	1.307	0.191		6.859	0.000	0.177
	Audit management	0.483	0.087	0.402	5.545	0.000	
	Security system	-0.074	0.090	-0.061	-0.819	0.413	
	Accident Investigation management	0.122	0.064	0.098	1.897	0.058	
	Internal control	0.926	0.094		10.791	0.000	
Internal control	Constant	0.926	0.094		10.791	0.000	0.623
	Risk	0.307	0.028	0.372	9.890	0.000	
	Reward	0.072	0.033	0.077	2.151	0.032	
	Warmth	0.116	0.024	0.168	4.782	0.000	
	Support	0.260	0.039	0.295	6.676	0.000	
Operational performance	Constant	0.875	0.164		5.329	0.000	0.272
	Control environment	0.146	0.076	0.127	1.916	0.056	
	Risk assessment	0.020	0.082	0.018	0.241	0.810	
	Control job	0.070	0.098	0.059	0.716	0.474	
	Information and communication	0.307	0.099	0.255	3.114	0.002	
	Supervision	0.107	0.071	0.099	1.502	0.134	

We used structural equation modeling (SEM) to analyze the data. In the structural model analysis, at least three questions were maintained for each construct (Bagozzi & Edwards, 1998), and the structural model was used to analyze the path hypotheses of all studies. In addition, according to the suggestions of Bagozzi and Yi (1988) and Joreskog and Sorbom (1989), the six most commonly used indicators for detecting fit are used as the criteria for evaluating the fit between the data and the model. The results of SEM analysis showed that $\chi^2 = 805.971$, $\chi^2 / df = 11.19$ (standard < 3), GFI = 0.86 (standard > 0.9), AGFI = 0.79 (standard > 0.8), RMSEA = 0.12 (standard < 0.08), SRMR = 0.12 (standard > 0.08), and RMSEA = 0.12 (standard < 0.08), SRMR = 0.015 (standard < 0.08), TLI = 0.89 (standard > 0.9), and CFI = 0.92 (standard > 0.9). This shows that the fit of this sample data to the overall model is also within a reasonable range.

As for the structural equation model (SEM) path analysis, Table 8 gives the results of the SEM path analysis. In this study, the results of organizational culture on risk management (R^2) are 0.556, which shows that the explanatory power of the model is acceptable; the results of organizational culture on internal control (R^2) are 0.762, which shows that the explanatory power of the model is good; the results of organizational culture, risk management, and internal control on operating performance (R^2) are 0.337, which shows that the explanatory power of the model is fair.

- a) Study H1: The Std of "organizational culture" on "operational performance" was -0.223, which reached a significant level (p -Value = .031), so this study H1 "organizational culture" has a significant effect on "operational performance" and the hypothesis is valid.
- b) Study H2: The Std of "organizational culture" on "risk management" was 0.746, which reached a significant level (p -Value = .000).
- c) Study H3: The Std of "risk management" on "business performance" is 0.097, which is not significant (p -Value = .126). According to Lam (2005), if the standardized regression coefficient is not explained together with the zero-order correlation between variables, it may mislead the understanding of the role of independent variables, especially the relative importance of independent variables. Researchers should be concerned not only with the net effect of each variable, but also with the indirect effect of each variable through other variables. In other words, in addition to understanding the net effects of the independent variables through the standardized regression coefficients, the study should also examine the full effects of the independent variables in terms of correlation. Therefore, the hypothesis that "risk management" has a significant effect on "operating performance" in this study is partially valid.
- d) Study H5: The Std of "organizational culture" on "internal control" is 0.873, which is a significant level (p -Value = .000), therefore, the hypothesis that "organizational culture" has a significant effect on "internal control" in this study H5 is valid.
- e) Study H6: The Std of "internal control" on "operational performance" was 0.704, which reached a significant level (p -Value = .000), so the hypothesis that "internal control" has a significant effect on "operational performance" in this study H6 is valid.

Table 8: List of Empirical Results of Research Hypotheses

DV	IV	Unstd	S.E.	Unstd./S.E.	p-Value	Std.	R ²
Risk Management	Organizational Culture	0.733	0.036	20.086	0.000	0.746	0.556
Internal Control	Organizational Culture	0.872	0.038	22.917	0.000	0.873	0.762
Management Performance	Organizational Culture	-0.285	0.132	-2.162	0.031	-0.223	0.337
	Risk Management	0.126	0.082	1.528	0.126	0.097	
	Internal Control	0.902	0.128	7.032	0.000	0.704	

In the past, the three-stage analysis method of Baron and Kenny (1986) was used. Preacher and Hayes (2008) suggest using Bootstrapping to calculate the "confidence interval for each effect", as in the other two approaches to mediating effects. Preacher and Hayes' (2008) multiple mediator test procedure is used to examine the test procedure, and the number of simulated samples mainly follows Zhao et al.'s (2012) recommendation of setting it at 2000, which is considered as a more stringent and strict test number criterion. Table 9 gives the results of the direct and indirect effects of risk management mediation path analysis. The total effect is 0.641, and the 95% confidence interval of BC/PC does not contain 0, and the *p*-value is less than .05, which means the total effect is significant, and then the mediation effect is analyzed. The direct effect is 0.236, and the 95% confidence interval of BC/PC does not contain 0, and the *p*-value is less than .05, which means that the direct effect is significant, and this mediating effect is partial mediation, which means that H4 is valid.

Table 9: Summary of the results of the mediation effect analysis of the study hypotheses

	Estimate	95% Confidence Interval		
		BC/PC <i>p</i> value	BC low~ up	PC low~ up
Indirect effect				
Organizational Culture→Risk Management→Management Performance	0.257	.000/.001	0.167~0.379	0.558~0.959
Organizational Culture→Management Performance	0.236	.001/.001	0.084~ 0.398	-0.410~0.007
Organizational Culture→Management Performance	0.641	.001/.001	0.347~0.636	0.355~0.641

BC: Deviation correction percentile method. PC: Percentile method.

Table 10 gives the results of the direct and indirect effects of the path analysis of internal control mediating effects. The total effect is 0.698 and the 95% confidence interval of BC/PC does not contain 0, and the p -value is less than .05, which means that the total effect is significant, and then the mediating effect is analyzed; the indirect effect is 0.743 and the 95% confidence interval of BC/PC does not contain 0, and the p -value is less than .05, which means that the internal control The direct effect is -0.198, and the 95% confidence interval of BC/PC contains 0, and the p -values are greater than .05, which means that the direct effect is not significant.

Table 10: Summary of the results of the mediation effect analysis for the study hypotheses

	Estimate	95% Confidence Interval		
		BC/PC p value	BC low~ up	PC low~ up
Indirect effect				
Organizational Culture→Internal Control→Management Performance	0.743	.001/.001	0.561~0.963	0.558~0.959
Organizational Culture→Management Performance	-0.198	.052/.055	-0.415~0.005	-0.410~0.007
Organizational Culture→Management Performance	0.698	.001/.001	0.396~0.691	0.405~0.698

BC: Deviation correction percentile method. PC: Percentile method.

From the above results, it can be seen that there is a relationship between the overall structure and the sub-structures.

5. Discussion

Most of the past studies on the issues of organizational culture, risk management, and internal control in enterprises have focused on the process of one to two factors each. This time, based on the previous research, this study will combine the background of the three factors, as well as the feelings of medical hospital employees, risk perception, management adjustment of high-level internal control, and hospital organizational culture, to explore the differences between hospitals and general corporate organizations. And on the basis of past studies, it increases the richness of different levels of hospitals in simultaneous comparisons, as well as increases the concern of hospitals in the establishment of risk management systems and internal institutionalization, especially in the governance of small and medium-sized hospitals, which is conducive to the resolution of other issues related to successive corporate governance, and is of great significance to the promotion of research on the sustainable management of organizations.

5.1 Theoretical implications

The academic contributions of this study are as follows.

1. In this study, based on the previous studies, the three factors are used to examine the differences between hospitals and general corporate organizations in terms of the background of the three factors, as well as the perceptions of employees, risk perceptions, top-level internal control management adjustments, and organizational culture of hospitals, and to increase the richness of the comparison between hospitals at different levels based on the previous studies, and to increase the attention of hospitals in establishing risk management systems and internal institutionalization, especially in small and medium-sized hospitals. In addition, we will also focus on the establishment of risk management systems and internal institutionalization in hospitals, especially in small and medium-sized hospitals.
2. The interfering variable is the variable that affects the strength or direction of the relationship between the independent variable and the dependent variable (Baron & Kenny, 1986). In previous studies, the concept of adaptation is often interpreted from a power-variable perspective. In this study, the results echoed Venkatraman (1989) argument of adaptation and demonstrated the effect of the combination of organizational culture, risk management, internal control, and operational performance strategies.
3. This study examines the concept of fit by exploring practical phenomena. The main theoretical basis is that the fit of organizational culture strategy, risk management strategy and internal control strategy will be an important influence on the performance of hospitals, and the underlying concept is that fit is seen as a consistent effect of the relevant components as a whole rather than a test of the effect of individual components on the performance of hospitals. The concept behind this is that adaptation is viewed as a coherent effect of the relevant components as a whole, rather than as a test of the effect of individual components on hospital performance. The results of this study not only provide a conceptualized model for future research, but also further demonstrate the role and influence of adaptation in hospital operation activities. The results of this study not only provide the researchers with a conceptual model for future research, but also further demonstrate the role and influence of the fit perspective in hospital operation activities, which makes the theoretical study operational. The use of fitness analysis tools to study possible pathways.
4. The findings of the study help to elucidate, illustrate and explain the relationship between organizational culture and business performance, i.e., the fit between risk management and internal control plays a role in the literature in addition to the mediating variable. In addition to complementing the role of the mediating variable described in the relevant literature in the past, it is also re-examined that it also has a role as a disturbance variable.

5.2 Managerial implications

The results of this study suggest that any industry that is managing or expanding its operations rapidly to increase profitability and competitiveness should also strive to minimize the risks associated with the complexity and dynamics of the business environment. The risks associated with the complexity and dynamics of the business environment should also be minimized. In particular, in order to adjust and adapt to

the development of processes, strategies, or organizational systems, the organization should effectively integrate and subsequently adjust its various feasible strategies, so as to enable the effective allocation of corporate resources. Effective integration and subsequent adjustment of various feasible strategies to enable effective allocation of corporate resources and to ensure the competitive advantage and survival of the enterprise in the industry can be an important issue to be considered when maintaining or enhancing the survival of the organization. From an organization's point of view, in order for an organization to operate sustainably, on the one hand, it should not ignore the changes in social demand, and on the other hand, it should also consider the organization's own capabilities and adjust the relevant operation and management practices in order to enhance its competitiveness. The organization should also consider its own capabilities and adjust its management practices so as to enhance its competitiveness.

Pursuing an organizational cultural orientation is critical to achieving sustainable benefits for the hospital management team and patients. Effective hospital operations require management of many aspects of the process, from control to flexibility, or from internal concerns to external concerns. The challenge for practitioners is to determine the optimal balance within the cultural infrastructure of the organization. Adaptability in a fast-changing business environment will support the current healthcare quality management system so that healthcare quality initiatives are fully functional to produce maximum positive outcomes (Fundin et al., 2018). Another challenge may be to develop a strategy to make the organization culturally balanced and well-managed to prevent the organization from having a single dominant cultural construct (Pakdil & Leonard, 2015).

Concerns about organizational behavior have shown the limitations of traditional risk management implementation frameworks. models such as COSO and ERM represent necessary tools, but are not sufficient to ensure adequate implementation of internal control and risk management systems. Often, excessive focus on customized rules and development processes takes a back seat to the emerging issues that many companies face. Introducing procedures and segregation of duties without taking into account other factors inherent in the behavior of individuals in the company will be futile.

The value of a business model needs to be assessed in a comprehensive manner that integrates relevant aspects such as competitiveness, profitability and business ethics. Internal control runs through the entire process of an organization's operation and management, and specifically refers to the process of self-restraint, self-protection and self-adjustment by the organization. Through internal control, an organization can effectively avoid operational risks and achieve the purpose of protecting its property and regulating its management.

The most important method of management is communication and it is essential to ensure that vertical communication between supervisors and supervisees and horizontal communication between staff remains unobstructed so that the organizational values and work rules can be communicated to the organization members and receive their feedback and response. At the hospital management

application level, an internal control chain of command is established so that co-workers are aware of the performance indicator items and work objectives are set according to the sequence. Second, at the management control level, the implementation of the hospital's internal control system is an important and critical element, whereas the legal code of the organization is a process rather than a structure, and the functioning of the system is the result of staff interaction. Third, management must delegate authority downward, and likewise, policies and guidelines are top-down.

5.3 Research limitations and prospects

The following are the limitations of this study:

1. Both domestic and foreign scholars have conducted studies on the relevant adaptation components, and their findings are obviously helpful for academic or practical purposes. Therefore, in addition to the three strategic factors of organizational culture, risk management, and internal control in this study, other industry-related influencing factors can also be. Therefore, in addition to the three strategic factors of organizational culture, risk management, and internal control in this study, we can also include other industry-related influencing factors to explore the causes of each of these factors and find alternative solutions to improve industry-related business performance.
2. Suggested directions for further research
 - a) The motivation strategy adopted by the organization according to the desired organizational culture type.
 - b) The response of employees according to the organization's risk management.
 - c) The variables related to risk management and internal control, or the cause-and-effect relationship between negative variables, as a research consideration to better correct the difference between importance and disregard.
 - d) Differences arising from different hospital levels and sizes may lead to different conclusions.

6. Conclusions

Based on the concept of fit, the main theoretical basis of this study is the fit of organizational culture strategy, risk management strategy and internal control strategy, and it explores the important impacts of hospital operational performance. The study examines the important factors that affect hospital performance. A total of 661 questionnaires from 20 hospitals were selected for empirical analysis and the following conclusions were drawn.

The results of the study confirmed that "direct influence of organizational culture on operating performance", "influence of organizational culture on risk management and on internal control" have significant influence on each other; "direct influence of internal control on operating performance" has significant influence on operating performance. Organizational culture does have the ability to influence operating performance through the mediating effect of risk management and internal control, and risk management and internal control have a mediating effect that exists.

The indirect effect of risk management can influence the operational performance of hospitals through organizational culture, and risk management has a partially mediating effect on organizational culture and operational performance. The overall effect of internal control on operating performance is positively significant, and the indirect effect of internal control can influence the operating performance of the hospital through the organizational culture. Organizational culture differences were significantly related to the implementation of internal control systems and risk management. Higher-level medical centers were more likely to recognize the effectiveness of internal control implementation than regional hospitals. On the other hand, there was also a significant relationship between hierarchical differences and the hospital's implementation of internal control systems. Medical centers that focused on performance and delegation realized the effectiveness of internal control implementation, and regional hospitals that did not focus on performance and delegation received more recognition. However, the level of certainty about the effectiveness of the implementation of the internal control system among the respondents of the regional hospitals ranged between fair and agreement. There is still room for improvement in the internal control system.

The conclusion of this paper illustrates that there is a significant relationship between organizational culture, risk management, internal control and hospital operational performance, which can be listed as the influential factors for the consideration of reasonable hospital performance enhancement, in order to provide theoretical references to enhance the growth rate and profitability of hospital operational efficiency.

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