Strengthening Financial Resilience in Chinese Public Hospitals: Dynamic capabilities perspective

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Abstract

The resilience of the healthcare system directly impacts the quality of public life. This study examines how dynamic capabilities in financial management, including revenue diversification, cost adjustment, budget flexibility, and financial informatization, influence the resilience of public hospitals in China. An online survey was conducted among 197 hospital staff using a seven-point Likert scale, and the collected data were analyzed using SPSSAU and Smart-PLS. The findings indicate that revenue diversification and cost adjustment significantly enhance financial resilience. This study provides valuable insights for policymakers seeking to strengthen hospital resilience and contributes to the existing body of literature on the resilience of healthcare finance.

Keywords: Financial Resilience; Dynamic Capability Theory; Revenue Diversity; Cost Adjustment

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1.0 Introduction

China as the largest developing country in the world, has faced significant challenges in its public health system due to the continuous evolution of social structures and disease patterns. The sharp increase in demand for high-quality medical services, driven by economic development, population aging, and the growth of chronic diseases, has strained the supply capacity of China's public health system. The COVID-19 pandemic further exacerbated these challenges, leading to shortages of medical resources and interruptions in medical services. Consequently, more than 50% of public hospitals experienced fiscal deficits, severely impacting their financial stability (NHC, 2024). Public hospitals, serving as the backbone of the healthcare system, play a vital role in providing basic medical services and emergency medical security. However, the financial crisis caused by these disruptions has seriously restricted their key functions, underscoring the need for enhanced resilience in public health systems. The World Health Organization (WHO, 2024) emphasizes the importance of investing in the resilience of public health systems to ensure sustainable healthcare delivery. In this context, enhancing the financial resilience of public hospitals through dynamic capabilities such as revenue diversification, cost adjustment, budget flexibility, and financial informatization is crucial for maintaining operational services during crises.

The theory of dynamic capabilities emphasizes an organization's ability to sense, seize, and reconfigure resources in response to crises, underscoring that merely possessing resources is insufficient for effectively addressing future emergencies and challenges (Cavallaro & Villani, 2024; Teece et al., 1997). Instead, organizations must cultivate dynamic capabilities to enhance their operational robustness, flexibility, and adaptability. The core principles of dynamic capabilities align closely with the concept of resilience, as they enable organizations to adapt and innovate in turbulent environments. However, previous research has predominantly focused on financial resilience in state-owned enterprises and banking institutions, with limited attention given to the resilience of healthcare systems (Hamid et al., 2023). Given the critical role of public hospitals in providing emergency medical support within the healthcare system, prior studies have insufficiently explored their resilience, particularly from a financial perspective. While some research has examined mechanisms of healthcare system resilience, financial aspects remain underexplored, especially regarding dynamic financial management capabilities. The application of dynamic capability theory within a financial resilience framework, using methodologies such as SEM-PLS, offers a promising approach to investigating how dynamic financial management capabilities—such as revenue diversification, flexible budgeting, cost adjustment, and financial informatization impact the financial resilience of public hospitals (Tascón et al., 2023). This gap in research highlights the need for studies that focus on enhancing the financial resilience of public hospitals through dynamic financial management, which is crucial for maintaining operational stability and providing consistent healthcare services during crises.

To address the existing research gap, this study aims to investigate the impact of key dynamic capabilities in financial management on the resilience of public hospitals.

Following a comprehensive literature review, this research develops an integrated framework designed to identify the critical dynamic capabilities in financial management and elucidate their mechanisms of influence within public hospitals. This framework is grounded in dynamic capability theory, which emphasizes the importance of dynamic financial management capability in responding to external environmental challenges. This study focuses on dynamic capabilities like revenue diversification, flexible budgeting, cost adjustment, and financial informatization to explore how these strategies enhance hospital resilience. The proposed framework contributes to the existing literature by offering a structured approach to understanding the relationship between dynamic financial management capabilities and organizational resilience in healthcare.

To achieve the research objectives, this study is structured as follows: Section 2 provides a comprehensive literature review, synthesizing existing knowledge and identifying gaps. Section 3 introduces the research hypotheses and conceptual framework, articulating the specific hypotheses and theoretical model guiding the investigation. Section 4 details the research methodology, explaining data collection and analysis methods to ensure transparency and validity. Section 5 presents the findings and discussion, interpreting results in light of the hypotheses and broader literature. Finally, Section 6 concludes the study by summarizing key findings, discussing managerial and practical implications, and acknowledging limitations, while suggesting avenues for future research to build upon the study's contributions. This structure ensures a logical flow from theoretical foundation to empirical analysis and practical implications.

2.0 Literature Review

2.1 Organizational Resilience

Resilience refers to the ability of an organization to withstand, adapt, and recover from a crisis. Scholars divide organizational resilience into three dimensions—robustness, adaptability, and flexibility—based on the time stages before, during, and after the crisis (Cavallaro & Villani, 2024). These dimensions are critical to maintaining operational continuity and financial stability, especially during periods of high uncertainty. The significant challenges facing Chinese public hospitals highlight the need for a comprehensive study of their financial resilience. Research shows that organizations that adopt key financial management strategies such as budget redundancy and revenue diversification can maintain adaptability and operational flexibility during crises (Tascón et al., 2023).

During the COVID-19 pandemic, manufacturing companies implemented various dynamic financial strategies to maintain financial stability and operational continuity (Cavallaro & Villani, 2024). Korean scholars have extended resilience research into this area, emphasizing hospital budget redundancy strategies, including dynamically adjusting spending structures to enhance operational flexibility. This approach is particularly important in the healthcare sector, where financial resilience directly affects service delivery

and patient care. By adopting such strategies, hospitals can better cope with financial challenges and ensure continued service provision during crises. However, despite the key role played by Chinese public hospitals in the national healthcare system, research on their resilience from a financial management perspective remains limited.

2.2 Dynamic Capability Theory

The survival and growth of an organization fundamentally depend on its ability to effectively manage and leverage its resources. However, merely possessing resources is insufficient for navigating uncertain risks and environmental disruptions (Cavallaro & Villani, 2024). The development of Dynamic Capability Theory (DCT) builds upon Resource Dependence Theory and the Resource-Based View, emphasizing an organization's capacity to sense, acquire, and reconfigure resources in response to emergencies and disruptive risks (Teece et al., 1997). Scholars argue that enhancing dynamic management capabilities is crucial for mitigating unpredictable risks by enabling organizations to adapt and innovate in turbulent environments. Despite advancements in this theoretical domain, existing research on the critical role of organizational management capabilities in responding to unforeseen crises remains limited. Furthermore, there is a need for deeper exploration into the key dynamic capabilities that influence the flexibility and resilience of public hospitals. Therefore, this study aims to construct a comprehensive dynamic capability assessment framework grounded in DCT to bridge the gap between financial management dynamic capabilities and organizational resilience. By doing so, it seeks to provide insights into how public hospitals can develop and utilize dynamic capabilities such as revenue diversification, flexible budgeting, cost adjustment, and financial informatization to enhance their ability to withstand and recover from financial shocks and other disruptions.

2.3 Dynamic Capabilities and Financial Resilience in Public Hospitals

In the public sector, dynamic capabilities play a pivotal role in assessing an organization's resilience in response to unexpected crises. Financial redundancy is often considered beneficial in maintaining performance during economic shocks, as it provides a buffer against unforeseen financial challenges. Ansmann et al. (2021) underscored the importance of restructuring resources within budgetary constraints and enhancing management capacity under uncertainty, highlighting the need for adaptability in financial management. Revenue diversification has been shown to improve the performance of state-owned banks, while Kazmi and Ahmed (2022) found that adjusting budget schedules enhances expenditure flexibility, allowing organizations to better manage financial resources in turbulent environments. Mattos (2023) explored strategies for reducing variable medical costs through flexible structural arrangements, which can be crucial for maintaining operational efficiency in healthcare settings. Additionally, other scholars have emphasized the role of financial information technology in the modernization of public health organizations, as it facilitates more efficient financial management and decision-making (Cavallaro & Villani, 2024).

While financial resilience has been extensively examined in sectors such as banking and government, empirical studies within the context of public healthcare remain insufficient. This gap is particularly significant given the critical role of healthcare systems in responding to crises and maintaining public health. To bridge this gap, this study applies Dynamic Capability Theory within a financial resilience framework to investigate how dynamic financial management capabilities (such as revenue diversification, flexible budgeting, cost adjustment, and financial informatization) impact the financial resilience of public hospitals. By exploring these capabilities, the study aims to provide insights into how public hospitals can enhance their ability to withstand financial shocks and maintain operational stability during crises.

3.0 Methodology

Diversification is critical for mitigating organizational operational risks, enhancing emergency management, and preventing crises. Adem (2023) emphasized that revenue diversification strengthens organizational stability while having a negative impact on specific risk indicators. The correlation between revenue diversification and crises significantly influences stability assessments (Duho et al., 2023). In hospitals, revenue diversification involves generating income beyond traditional outpatient and inpatient services, reducing dependence on a single revenue stream, and spreading financial risks. Duho (2023) found that during the COVID-19 pandemic, public hospitals facilitated operational recovery by increasing alternative revenue sources. These studies support the idea that organizations should identify new income streams to support the establishment of financial redundancies, backups, and reserves, thereby enhancing operational resilience. Thus, the following hypothesis is proposed:

H1: Revenue diversification has a positive and significant impact on the financial resilience of hospitals.

Public hospitals play a crucial role in the healthcare sector by effectively utilizing public funds to enhance organizational productivity. Cost management strategies enable the adjustment of expenditure structures, including internal allocations between long-term and short-term, fixed and variable costs, directing financial resources toward priority activities (1997). By adjusting these costs, hospitals can reduce reliance on external funding sources, such as government subsidies, while staying within budgetary constraints. The ability to adjust expenditures within a limited budget represents a dynamic financial management capability, allowing hospitals to manage unpredictable risks while maintaining operational stability. Therefore, the following hypothesis is proposed:

H2: Cost adjustment has a positive and significant impact on the financial resilience of hospitals.

Flexible budgeting is a crucial dynamic management tool that enables organizations to adjust financial strategies in response to changing circumstances. Unlike static budgets, which remain fixed, flexible budgets adapt to variations in revenues and expenditures. Agyemang and Ryan (2013) found that departments prefer flexible budgets to accommodate environmental changes. This flexibility enables hospitals to prepare for routine operations and unexpected shocks by incorporating budgetary redundancies, effectively responding to fluctuating market conditions and patient demands. By adopting flexible budgets, hospitals can improve performance through dynamic financial resource allocation. Therefore, the following hypothesis is proposed:

H3: Flexible budgeting has a positive and significant impact on enhancing the financial resilience of hospitals.

Financial informatization utilizes information technology to automate and enhance financial management processes. Digital systems overcome time and geographical barriers, facilitating connections between departments, partners, and stakeholders, and promoting efficient collaboration through adaptive business processes. Financial information technology enables hospitals to access real-time financial data, monitor performance metrics, and identify growth opportunities (Garcia-Perez et al., 2023). By enabling data-driven decision-making, it strengthens the hospital's ability to adapt to changing market conditions, regulatory requirements, and financial challenges. The application of this technology improves governance and risk management practices, thereby reducing financial risks. Therefore, the following hypothesis is proposed:

H4: Financial informatization has a positive and significant effect on enhancing the financial resilience of hospitals.

The path relationships between the variables, based on the hypotheses outlined above, are depicted in Figure 1.

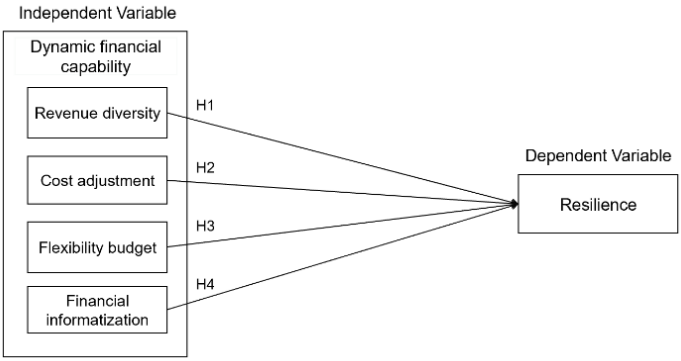

Figure. 1: The conceptual framework

4.0 Methodology

Public hospitals in China are the cornerstone of the public healthcare system. However, during the COVID-19 pandemic, they experienced significant revenue declines and operational disruptions but ultimately managed to overcome the crisis. Based on previous studies (Etikan, 2016), this research employed purposive sampling to survey financial managers and employees in these hospitals. Purposive sampling was chosen because it effectively targets specific respondents with relevant expertise. This is crucial when exploring complex and context-specific issues such as financial management in public hospitals.

Drawing on existing literature, we developed a structured questionnaire to investigate the dynamic financial management capabilities of public hospitals, including four dimensions: revenue diversification, flexible budgeting, cost adjustment, and financial informatization. Four items on revenue diversification were adapted from Busch and Kick (2009) and Mnasri and Abaoub (2010) to assess how financial redundancy enhances resilience. Six items on budget flexibility proposed by Ekholm and Wallin (2011) were used to examine the impact of flexible budgets on hospital performance under adverse conditions. Based on the research by Zhang et al. (2020), five items on cost adjustment capabilities were designed to evaluate how hospitals adjust their cost structures to reduce reliance on external funding. Lastly, four items on financial informatization, adapted from Hussain and Papastathopoulos (2022), assessed how it helps hospitals adapt to market conditions and financial challenges.

The questionnaire employed a seven-point Likert scale, which offers advantages in terms of measurement accuracy. The survey was distributed online to 426 financial department managers and staff members from March to May 2024, yielding 205 valid responses, with a response rate of 48.62%. Anderson and Gerbing (1988) recommend that when each construct has three or more indicators, a sample size of 150 is typically sufficient for structural equation modeling (SEM). The sample size for this study is deemed adequate to ensure the reliability and validity of the results. This response rate exceeds the recommended minimum threshold, enhancing the statistical power of the study and ensuring the robustness and generalizability of the findings.

SPSSAU, a web-based version of SPSS, was used in this study for demographic data analysis due to its comprehensive statistical capabilities that support the reliability and robustness of the data. Smart PLS 4.1 was employed for advanced analysis, especially in cases of smaller sample sizes and non-normally distributed data. Thus, both SPSSAU and Smart PLS 4.1 were utilized for model testing in this study.

5.0 Data analysis

5.1 Demographic statistic

Table 1 displays the demographic characteristics of the respondents. Among them, 40.48% are aged 40 or above, 52.19% are engaged in hospital management, and 60.98% work in

secondary or higher-level hospitals. Additionally, 85.85% hold a bachelor's degree or higher, while 28.78% have over ten years of work experience. These statistics suggest that the majority of respondents possess the necessary work experience, educational qualifications, and cognitive skills relevant to the field of study.

Table 1. The demographic statistics

Item	Option	Frequency	Percentage (%)	Accumulate percentage (%)
1. Gender:	Male	88	42.93	42.93
	Female	117	57.07	100.00
2. Age	Below 30 years	33	16.10	16.10
	30 - 40 years	89	43.41	59.51
	41 - 50 years	62	30.24	89.76
	Above 50 years	21	10.24	100.00
3. Education:	Doctor	9	4.39	4.39
	Masters	56	27.32	31.71
	Bachelor	111	54.15	85.85
	Other	29	14.15	100.00
4. Years of service experience	Less than one year	14	6.83	6.83
	1 - 5 years	61	29.76	36.59
	5 - 10 years	71	34.63	71.22
	More than ten years	59	28.78	100.00
5. Level of your hospital	The tertiary hospital	70	34.15	34.15
	The second level	84	40.98	75.12
	The primary level	41	20.00	95.12
	Other	10	4.88	100.00
6. Position:	Dean	12	5.85	5.85
	Managers	95	46.34	52.20
	Staff	90	43.90	96.10
	Other	8	3.90	100.00
Sum		205	100.0	100.00

(Source:) SPSSAU analyzed by authors

Table 2 shows that the Cronbach's α value is 0.951, indicating a high level of reliability in the data. Table 3 reveals that the KMO value is 0.929, suggesting that the data is suitable for factor analysis. Both the KMO value and Bartlett's test of sphericity support the subsequent steps of the study.

Table 2. Cronbach reliability analysis

Item	Sample	Cronbach α coefficient
26	205	0.951

Table 2. Cronbach reliability analysis

Item	Sample	Cronbach α coefficient

Table 3. KMO and Bartlett's test

KMO-value		0.929
Bartlett Sphericity Test	X2	3084.346
	df	325
	p-value	0.000

5.2 PLS Measurement model

Table 4 shows that the composite reliability (CR) values for all constructs in the model exceed 0.70, indicating strong internal consistency and reliability (Fornell & Larcker, 1984). Additionally, all constructs' average variance extracted (AVE) values are more significant than 0.50, demonstrating satisfactory convergent validity (Fornell & Larcker, 1981). The SRMR value of 0.072 confirms a satisfactory model fit, as validated by Heseler et al. (2014).

Table 4. The Reliability and convergent validity of the measurement model

	Cronbach α	CR	AVE	SRMR
SD	＞0.7	＞0.7	＞0.5	＜0.08
FR	0.808	0.813	0.567	0.072
RD	0.764	0.767	0.586	
FB	0.750	0.755	0.502	
EA	0.838	0.845	0.555	
FI	0.758	0.776	0.512	

(Source:) Hair Jr. et al. (2017), Henseler et al. (2015), Diamantopoulos and Siguaw (2006)

Table 5 indicates that the measurement model demonstrates discriminant validity, as the cross-factor loadings exceed 0.7 and are significantly greater than the loadings on other factors. Additionally, the difference between the factor loadings and cross-loadings exceeds 0.1. Therefore, Table 5 confirms that all components of the measurement model meet the established criteria (Chin, 1998b).

Table 5. The discriminable validity of the measurement model

	Expenditure adjustment	Flexible budget	Financial informatization	Hospital resilience	Revenue diversity
Expenditure adjustment	0.74				

Flexible budget	0.60	0.71			
Financial informatization	0.63	0.60	0.71		
Hospital resilience	0.61	0.61	0.61	0.75	
Revenue diversity	0.62	0.64	0.62	0.60	0.77

(Source:) Author calculation

5.3 The Structural measurement

Table 6 presents the results of the structural model analysis, which was conducted to evaluate the predictive power of the model. In line with the recommendations of Chin (1998b) and Ringle (2004), the coefficient of determination (R^2) was calculated to assess the model's explanatory power. The R^2 value for financial resilience is 0.741, indicating a high level of predictive accuracy. This suggests that the model effectively captures the variability in financial resilience, aligning with the criteria established by Cohen (1988) and Hair Jr. et al. (2017), who emphasize that an R^2 value of this magnitude signifies substantial explanatory power.

The analysis reveals that revenue diversification, flexible budgeting, and cost adjustment have a strong impact on financial resilience. In contrast, financial informatization exhibits a weaker effect, as indicated by the F^2 value, which is less than the threshold for a medium effect ($F^2 \geq 0.15$). According to Cohen (1988), an F^2 value of 0.02 or greater indicates a small effect, while values of 0.15 or greater signify a medium effect, and values of 0.35 or greater denote a significant effect. Therefore, while financial informatization contributes positively to financial resilience, its influence is relatively modest compared to the other dynamic capabilities.

Furthermore, the Q^2 value in Table 6 is significantly greater than zero, suggesting that the exogenous constructs possess adequate predictive power for the endogenous latent variables. As explained by Hair et al. (2017), this finding confirms that the model has sufficient predictive ability, reinforcing its validity and reliability. The positive Q^2 value indicates that the model can predict the endogenous variables effectively, thereby supporting the theoretical framework and the hypothesized relationships between the constructs.

Table 6. Path coefficients of the structure model

$F^2 > 0.02$	$Q^2 > 0$	$P < 0.05$
	0.406 (medium)	
0.043(moderate)		0.050
0.043(moderate)		0.031

0.046(moderate)	0.002
0.027(weak)	0.060

5.4 Hypotheses testing

Table 7. The Structural measurement (Path correlation)

Path	β	T-value＞1.96	P-value＜0.05	Result
H1: Revenue diversity-> Financial resilience	0.209	2.592	0.005	Supported
H2: Flexible budget -> Financial resilience	0.240	1.868	0.031	Reject
H3: Cost adjustment-> Financial resilience	0.264	2.907	0.002	Supported
H4: Financial informatization->Financial resilience	0.203	1.554	0.060	Reject

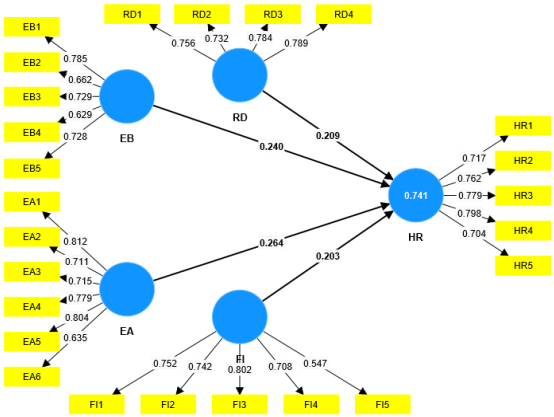

Figure. 2: The path coefficient test

Table 7 presents the results of the PLS-SEM path analysis, demonstrating the influence of each variable on hospital financial resilience. The analysis reveals that all constructs except

financial informatization exhibit statistically significant effects ($p < 0.05$). Specifically, revenue diversification ($\beta = 0.209$ $p < 0.05$) and cost adjustment ($\beta = 0.240$, $p < 0.05$) exert a statistically significant positive influence on financial resilience, thereby confirming hypotheses H1 and H3. In contrast, while flexible budgeting ($\beta = 0.264$, $p = 0.031$) and financial informatization ($\beta = 0.203$, $p = 0.060$) show positive directional relationships with resilience, their effects lack statistical significance of T-value at the 1.96 threshold. Consequently, hypotheses H2 and H4 are not supported by the empirical evidence.

6.0 Finding and discussion

The results indicate that revenue diversification in public hospitals is positively correlated with hospital resilience ($\beta = 0.209$, $t = 2.592$, $p \leq 0.05$), thus supporting Hypothesis 1 (H1). This finding highlights the importance of revenue diversification in enhancing the financial resilience of public hospitals, consistent with previous studies (Adem, 2023; Duho et al., 2023). Adem (2023) suggests that by diversifying income sources, hospitals can better mitigate risks and challenges posed by both internal and external emergencies. The conclusion of this study confirms this view, further affirming that revenue diversification helps hospitals adapt to changing conditions and build resilience by effectively creating financial redundancy.

The analysis shows that, although flexible budgeting in public hospitals is positively correlated with hospital resilience, it is not statistically significant ($\beta = 0.240$, $t = 1.868$, $p = 0.06$). This result contradicts Hypothesis 2 (H2). According to previous research, budget flexibility is an important financial management measure for hospitals to cope with large expenditures in emergencies (Ekholm & Wallin, 2011). Oyadomari et al. (2018) confirmed that the financial redundancy generated by flexible budgeting helps improve an organization's emergency financial management capabilities. However, in turbulent environments with resource shortages and service interruptions, organizations may struggle to predict and provide sufficient cash flow to quickly support budget flexibility.

The results of the test show that cost adjustment in public hospitals positively influences financial resilience ($\beta = 0.264$, $t = 2.907$, $p \leq 0.05$), supporting Hypothesis 3 (H3). This is consistent with Liu (2024), who emphasizes that high fixed costs are a key risk factor affecting the stability and sustainability of healthcare operations. Adjusting costs within limited budget resources provides new strategies for organizations to cope with unforeseen shocks and overcome limitations in medical resources and services. This study further demonstrates that adjusting the cost structure and significantly increasing the proportion of variable costs helps mitigate unexpected challenges in a dynamic environment.

Finally, the results of Hypothesis 4 (H4) do not support the assumption that financial informatization significantly influences resilience in public hospitals. Although it has a positive impact on the stability, adaptability, and flexibility of financial operations ($\beta = 0.203$, $t = 1.554$, $p \leq 0.001$), it is not statistically significant. This finding contradicts earlier studies by Garcia et al. (2023). Garcia et al. (2023) found that financial informatization helps public healthcare institutions maintain sustainable operations during crises. However, this study

suggests that the development of healthcare informatization requires significant investments, complex processes, and authorization mechanisms, which may affect its practical impact.

7.0 CONCLUSION

7.1 Management Implementation

In the VUCA era, frequent public health events leading to resource shortages and disruptions in medical services pose significant challenges to the financial resilience of public hospitals. As the largest developing country, China plays a crucial role in global healthcare cooperation and emergency medical security systems. As the cornerstone of China's public healthcare system, public hospitals provide a solid foundation for sustainable medical operations through their dynamic financial management capabilities and resilience. The main findings of this study support the positive impact of revenue diversification and cost adjustment on resilience, as highlighted in previous research (Asif & Akhter, 2019; García-Cornejo & Pérez-Méndez, 2018; Hammudeh et al., 2020). This underscores the necessity for public hospitals to broaden income sources and implement proactive cost measures to enhance their adaptability during unexpected disruptions.

Furthermore, the cost adjustment strategy, which involves reducing high fixed costs while enhancing budget flexibility, is crucial for improving the adaptability of healthcare expenditures during unexpected disruptions. This approach aligns with global best practices in healthcare management, where cost restructuring has been shown to improve financial stability by up to 14% (García-Cornejo & Pérez-Méndez, 2018). Although flexible budgeting and financial informatization did not show significant direct effects on resilience, which contrasts with previous studies (Ekholm & Wallin, 2011; Hussain & Papastathopoulos, 2022; Kass-Hanna et al., 2022; Oyadomari et al., 2018), they may still have potential indirect benefits, warranting further exploration.This suggests that while these tools may not directly enhance resilience, they can play a supportive role in optimizing financial management processes.

The findings of this study provide valuable insights for decision-makers in formulating resilience strategies from the perspective of financial management. By diversifying revenue streams and implementing cost adjustment strategies, public hospitals can better navigate the challenges posed by public health emergencies and systemic disruptions. This research contributes to the broader discourse on healthcare resilience by highlighting the importance of dynamic financial capabilities in ensuring sustainable medical operations. As China continues to play a pivotal role in global healthcare cooperation, these insights are particularly relevant for informing policy and operational strategies that enhance the resilience of public hospitals. Future research should explore how these financial management strategies interact with emerging trends in healthcare, such as digital transformation and integrated care models, to further strengthen the resilience of healthcare systems in the face of evolving challenges.

7.2 Limitations

This study has several limitations due to constraints in time and resources. First, its cross-sectional design does not account for temporal variations in key factors. Second, the exploration focuses solely on organizational-level determinants and omits external stakeholders (e.g., government entities, suppliers, and community members). Third, the research lacks comprehensive comparative data from public hospitals in developed nations. Finally, while the R^2 value of 0.742 indicates substantial explanatory power, additional determinants influencing financial resilience beyond income diversification and cost adjustment require further investigation. Addressing these limitations in prospective studies could enhance the robustness and generalizability of findings in this field.

7.3 Future research suggestion

To address the limitations of the current study, future research should utilize time-series analysis to explore the evolution of hospitals' dynamic financial management capabilities. It is crucial to include a broader range of stakeholder perspectives, such as those from regulatory bodies and patients, to gain a more comprehensive understanding. In addition to these factors, further investigation is needed to identify other influences on financial resilience beyond revenue diversification and cost adjustment. This broader approach will enhance understanding and support the development of more effective strategies to strengthen hospital resilience in the face of ongoing challenges.

Article Contribution to Related Field of Study

This study applies dynamic capability theory to examine the relationship between public hospitals' dynamic financial management capabilities and organizational resilience. Grounded in dynamic capability theory, the research offers insights into the underlying mechanisms that contribute to enhancing hospital resilience. By employing partial least squares structural equation modeling (PLS-SEM), we present empirical evidence to support management decision-making related to hospital resilience from a dynamic financial management perspective. These findings enrich the literature on dynamic capability theory and advance research on resilience in public hospitals.

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