Influencing Factors on Dynamic Capability and Operational Performance; The Case of Chongqing Cultural Industrial Parks

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Abstract

The development of China's cultural industrial parks has played a significant role in promoting the growth of cultural industries and enhancing public engagement. This study aimed to (1) examine the factors influencing operational performance, (2) analyze the mediating role of dynamic capabilities between technical flexibility, structural flexibility, cultural flexibility, and operational performance in Chongqing Cultural Industrial Park, and (3) create a model to improve the operational performance of the Chongqing Cultural Industrial Park. The study employed mixed research methods, with the quantitative portion focusing on managers working in the Chongqing Cultural Industrial Park for over two years, with a sample size of 548 respondents. The qualitative aspect involved in-depth interviews with 10 key experts in the field of operational performance of cultural industrial parks. A convenience sampling method was used to select respondents, and data were collected using questionnaires and interview forms. Data analysis was conducted through descriptive statistics and Structural Equation Modeling (SEM) using AMOS software.

The study found that: (1) Technical flexibility has a significant positive effect on park performance, while structural flexibility and cultural flexibility also significantly influence park performance; (2) Dynamic capabilities play a mediating role in the relationship between technical flexibility, structural flexibility, cultural flexibility, and operational performance in Chongqing Cultural Industrial Park; and (3) A model to improve operational performance in Chongqing Cultural Industrial Park suggests that enhancing technical flexibility, structural flexibility, and cultural flexibility not only directly improves operational performance but also boosts performance through the mediating role of

dynamic capabilities. The study concludes that there are various approaches and theories available for improving the operational performance of industrial parks.

Keywords: Dynamic Capabilities; Technical Flexibility; Structural Flexibility; Cultural; Operational Performance; Cultural Industrial Parks

Introduction

Background of the Study: China's cultural industrial parks have played a crucial role in the country's cultural and economic development. With 3,401 cultural industry parks in operation, the industry exhibits diverse operation models, primarily dominated by self-operated enterprises (88%), followed by government-led and mixed operations (10%). Regional disparities are evident, with the eastern region showing greater concentration due to stronger economic and policy support (Wang, 2011). Notably, Chongqing's cultural industry parks have expanded significantly, emerging as engines of economic transformation. The city's rich cultural heritage—including Three Gorges culture, Bayu culture, and anti-war culture—provides a strong foundation for cultural industry development (Fang, 2018). Government policies have supported the growth of Chongqing's cultural industry parks, particularly through the integration of culture and technology. Digital content and new media sectors have flourished, and there has been a strong emphasis on culture-tourism integration (Guo, 2019). The Nanbin Road Cultural Industry Park, designated as a national demonstration park in 2017, is a notable example. By 2022, it housed 1,372 cultural enterprises, generating 5.417 billion yuan in revenue and contributing 211 million yuan in profit and tax.

However, the COVID-19 pandemic caused significant disruptions, restricting production activities and limiting offline events, leading to financial losses and talent attrition (Zhou & Liu, 2021). Despite these challenges, the crisis also accelerated digital transformation, fostering new business models and opportunities for cross-sector integration, which strengthened the parks' resilience and adaptability (Sun & Yu, 2020).

Statement of the Problem:Despite its rapid growth, Chongqing's cultural industry parks remain in the early stages of development compared to national standards. More than half of the municipal

parks were only established in the past five years, and many still struggle with long periods of unprofitability due to substantial initial investments (Wang, 2011).

The parks face both external and internal risks. Externally, industrial structure risks arise from a lack of differentiation, making it difficult for parks to maintain long–term competitiveness. Policy risks also pose challenges, as regulatory shifts could significantly impact core industries (Zhang & Yu, 2019). Economic risks, influenced by macroeconomic fluctuations, further threaten investment stability (Wang, 2011).Internally, operational inefficiencies hinder the parks' growth. Many cultural industry parks in Chongqing still follow rigid traditional management structures, which limit their ability to adapt to fast–changing market dynamics and technological advancements (Ambrosini & Bowman, 2009). Additionally, weak organizational flexibility and inadequate strategic planning reduce their ability to innovate and respond to consumer demand shifts effectively (Eisenhardt & Martin, 2000).Addressing these challenges requires improved strategic flexibility, enhanced management models, and a stronger emphasis on innovation and cross–industry collaboration to ensure the long–term sustainability of Chongqing's cultural industry parks.

Research Objective

1. To study the factors affecting the operational performance of Chongqing Cultural Industrial Park.

2. To Analyze the mediating role of enterprise dynamic capabilities between technical flexibility, structural flexibility, and cultural flexibility and operational performance in Chongqing Cultural Industrial Park.

3. To create a model for improve the operational performance of Chongqing Cultural Industrial Park.

Research Hypothesis

H1: Technical flexibility has a significant positive effect on dynamic capabilities.

H2: Structural flexibility has a significant positive effect on dynamic capacity.

H3: Cultural flexibility has a significant positive effect on dynamic capabilities.

H4: Dynamic capabilities have a significant positive effect on the operational performance of cultural industrial parks.

H5: Technical flexibility has a significant positive effect on the operational performance of cultural industrial parks.

H6: Structural flexibility has a significant positive effect on the operational performance of cultural industrial parks.

H7: Cultural flexibility has a significant positive effect on the operational performance of cultural industrial parks.

H8: Dynamic capabilities pay the mediating relationship between technical flexibility and operational performance of cultural industrial parks.

Literature Review

Theoretical Framework

The study is grounded in four major theories:

1. Cognitive Flexibility Theory (CFT) – developed by Spiro, Feltovich & Coulson (1988), explains how learning occurs in complex environments. It emphasizes multidimensional knowledge construction, which enhances an enterprise's adaptability to dynamic market conditions.

2. Dynamic Capability Theory (DCT) – Initially introduced by Teece, Pisano & Shuen (1997), this theory describes an organization's ability to integrate, build, and reconfigure resources to respond to environmental changes. It highlights the importance of agility in sustaining competitive advantage.

3. Flexible Firm Model (FFM) – Proposed by Atkinson (1984), this model discusses how firms restructure their workforce to achieve greater flexibility, emphasizing the need for dynamic hiring policies to cope with uncertain business environments.

4. Organizational Management Theory (OMT) – as developed by Fayol (1916) This theory examines how organizations are structured and managed, incorporating classical management principles, behavioral science, and modern systems thinking to enhance efficiency

The research incorporates previous studies that align with the current investigation on enterprise dynamic capabilities and operational performance in cultural industrial parks.

1. Research on Organizational Flexibility

Askari (2001) conducted an empirical study on 173 high-tech firms, concluding that both proactive and reactive flexibility positively impact strategic and financial performance. His findings emphasized that proactive flexibility had a more significant impact than reactive flexibility.

Shao &Zhou (2016) explored the connection between organizational flexibility and innovation, stating that flexible enterprises excel in reconfiguring resources and fostering product innovation.

Gunasekaran et al. (2021) examined the role of organizational flexibility in supply chains, highlighting its moderating effect on the relationship between data analytics capabilities and competitive advantage.

2. Research on Dynamic Capabilities

Zahra et al. (2002) and Teece (2007) studied the ability of firms to sense and respond to environmental changes, influencing their long-term sustainability.

Jantunen et al. (2005) and Protogerou et al. (2012) emphasized how integrating new knowledge into organizational structures enhances dynamic capabilities.

Boccardelli & Magnusson (2006) discussed the role of strategic decision-making in strengthening dynamic capabilities.

3. Research on Operational Performance

Calori & Sarnin (1991) introduced efficiency and effectiveness as key components of performance measurement.

Bourne et al. (2018) argued that performance should be measured across social, organizational, and individual dimensions.

According to the OECD (2002), performance is defined as the degree to which an activity meets specific standards or requirements.

Conceptual Framework

This study constructs a theoretical analysis framework of the relationship between organizational flexibility, dynamic capabilities and the operational performance of cultural industrial parks. In this analytical framework, organizational flexibility can not only influence the operational performance of cultural industrial parks through technical flexibility, cultural flexibility and structural flexibility, but also influence dynamic capabilities, thus indirectly affecting the operational performance of Chongqing cultural industrial parks. The specific conceptual model is shown below:

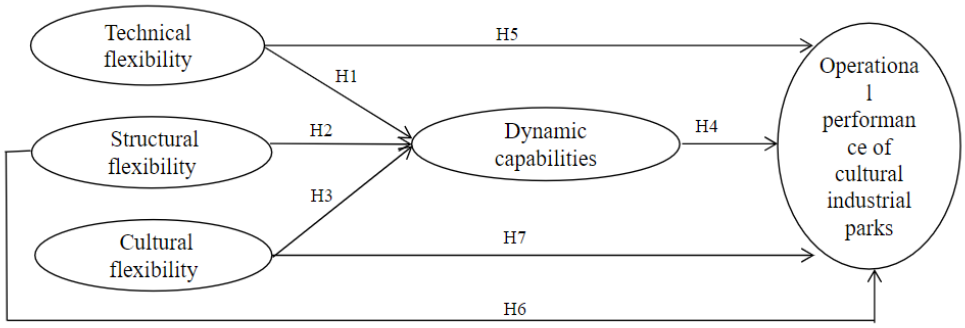


Figure 1 Conceptual Framework

Research Methodology

The study adopts a mixed research method, integrating both quantitative and qualitative approaches to explore the relationship between organizational flexibility, dynamic capabilities, and operational performance in Chongqing Cultural Industrial Parks

1. Population and Sample

Quantitative Research Population:

The research population consists of managers who have been employed for more than two years in 14 cultural industry parks in Chongqing.These parks vary in size, operational focus, and geographical distribution

Sampling Method: A stratified sampling method was used to ensure a balanced representation of different park categories based on managerial workforce size. The total sample size was 506 respondents, determined using Slovin's formula to maintain statistical validity

Qualitative Research Population and Sample:

Participants for qualitative research were selected via purposive sampling, focusing on experts, managers, and professors in the cultural industry 10 interviewees were selected:

2 experts (one in public cultural services, one in cultural industry research).

3 park managers from different industrial parks.

5 professors from local and provincial universities

2. Tools Used in Data Collection

Quantitative Research Tool – Questionnaire.

Qualitative Research Tool – Semi-Structured Interviews

3. Data Collection Process

Quantitative Data Collection: Conducted using both offline (on-site) and online surveys via the Questionnaire Star platform Respondents were screened to ensure they met eligibility criteria (park managers with 2+ years of experience)

Qualitative Data Collection: Semi-structured interviews were conducted with 10 experts and managers.Unstructured observations were also used to complement the findings

Research Results

Quantitative Analysis

Structural equation modeling

Constructing structural equation models

In contrast to traditional econometric modeling, structural equation modeling can handle multiple variables, including measurement error, and can also measure latent variables. Therefore, we use structural equation modeling to statistically test each hypothesis to examine how well the sample data fit the hypothesized model. The components of structural equation modeling contain two major aspects: measurement modeling and structural modeling. The measurement model consists of latent and observed variables, and mainly reflects the extent to which directly observable observed variables represent or present latent variables that are not directly observable, and there is a linear relationship between latent and observed variables. While structural modeling embodies the linear relationship between endogenous latent variables and exogenous latent variables. When mediation effect analysis is conducted through structural equation modeling, common AMOS model fit indices include goodness-of-fit index (GFI), comparative fit index (CFI), root mean square error approximation index (RMSEA), and standardized root mean square residual (SRMR), and it is generally considered that the GFI and CFI are greater than 0.9, the RMSEA is less than 0.08, and the SRMR is less than 0.05. The model is considered to be a good fit to the data when the test values of the regression results meet or approach the above criteria.

Model Testing and Correction

In this study, AMOS is used to operate and analyze the initial structural equation model, and then to validate the set influence paths in the initial structural equation model, and the results are shown

in Table 4.15, the $\chi 2$ value of the initial model fit is 715.672 (degrees of freedom df = 416), and the $\chi 2/df$ is equal to 1.720 < 2, which indicates that the fitting effect is better; at the same time, the TLI value of this initial model is 0.928 and CFI value of 0.962, both of which meet the criteria of values greater than 0.9; RMSEA value of 0.049 and SRMR = 0.042, both of which meet the criteria of less than 0.8. The initial model fit indices indicate that overall the initial model fits the sample data well. However, the path coefficients of 2 of the paths did not pass the significance test, and they were the following paths: OPC<---SF, OPC<---CF.

TF, SF, CF, DC, OPC correspond to technical flexibility, structural flexibility, cultural flexibility, dynamic capacity and park performance, respectively.

Table 1 Part analysis and Model Fit Tests

Hypothesis	**trails**	**Standardized path factor**	**SE (standard error)**	**CR**	**P-value**	**Supported /unsupported**
H1	DC<---TF	0.328	0.055	4.689	***	Supported
H2	DC<---SF	0.283	0.054	4.336	***	Supported
H3	DC<---CF	0.275	0.081	4.143	***	Supported
H5	OPC<---TF	0.264	0.067	3.373	***	Supported
H4	OPC<---DC	0.254	0.071	4.162	***	Supported
H6	OPC<---SF	0.063	0.045	0.727	0.482	unsupported
H7	OPC<---CF	0.083	0.057	1.03	0.262	unsupported
	goodness of fit	CMIN=715.672 SRMR=0.042 DF=416 CMIN/DF=1.720 CFI=0.962 IFI=0.949 TLI=0.928 RMSEA=0.049				

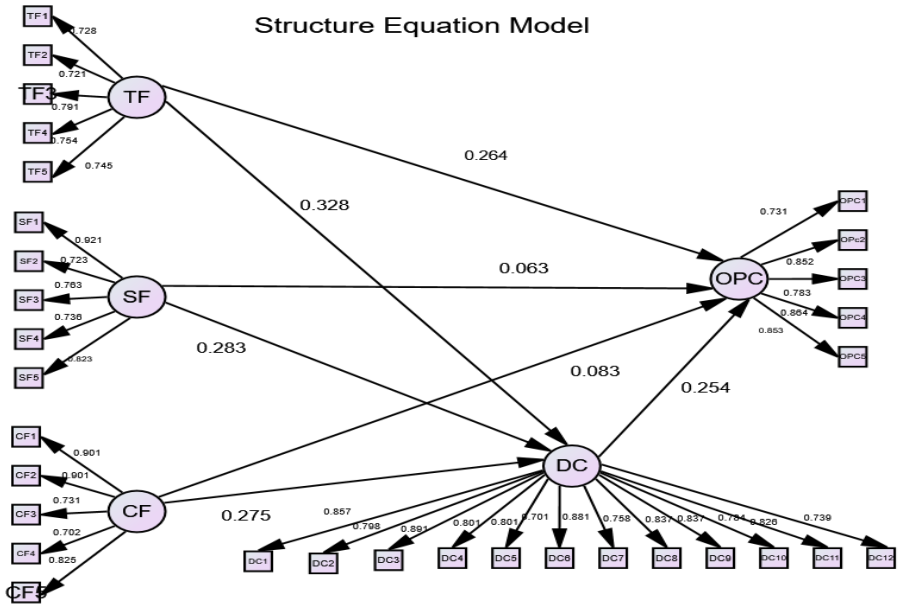


Figure 2 Modified structural equation modeling

Results of research hypothesis testing

Table 2 Bootstrap test results

Indirect effects pathway			non–standardized effect			Ratio of mediated effects to total effects (%)	Biased–corrected bootstrap 95% placement confidence interval (math.)	
			intermediary effect	direct effect	aggregate effect		lower limit	limit
Technical flexibility	Dynamic capability	Park performance	0.169**	0.248**	0.418**	40.590	0.019	0.112
Structural flexibility	Dynamic capability	Park performance	0.094**	0.070	0.164**	57.500	0.007	0.070
Cultural flexibility	Dynamic capability	Park performance	0.143*	0.078	0.221**	64.770	0.015	0.097

Through 548 questionnaire data from 14 cultural industry parks in Chongqing, using SPSS and AMOS, exploratory factor analysis, validation factor analysis, structural equation modeling analysis, and regression analysis, the theoretical hypotheses of the relationship and the mechanism of the role of organizational flexibility, dynamic capabilities, and the performance of cultural industry parks were verified, and the results of the empirical examination are shown in Table 3

Table 3 Result Hypothesis

theoretical assumption	Hypothetical content	P–value	Result
H1	Technical flexibility has a significant positive effect on dynamic capabilities.	***	supported
H2	Structural flexibility has a significant positive effect on dynamic capacity.	***	supported
H3	Cultural flexibility has a significant positive effect on dynamic capabilities.	***	supported
H4	Dynamic ability has a significant positive effect on the operational performance of cultural industrial parks.	***	supported
H5	Technical flexibility has a significant positive effect on the operational performance of cultural industrial parks.	***	supported
H6	Structural flexibility has a significant positive effect on the operational performance of cultural industrial parks	0.482	unsupported
H7	Cultural flexibility has a significant positive effect on the operational performance of cultural industrial parks.	0.262	unsupported
H8	Dynamic capabilities mediate the relationship between technical flexibility and operational performance of cultural industrial parks.	**	supported

theoretical assumption	Hypothetical content	P–value	Result
H9	Dynamic capabilities mediate the relationship between structural flexibility and the operational performance of cultural industrial parks.	**	supported
H10	Dynamic capabilities mediate the relationship between cultural flexibility and the operational performance of cultural industrial parks.	*	supported

Through the analysis of the above empirical results: The standardized path coefficients between technical flexibility, structural flexibility, cultural flexibility and dynamic capability are 0.328 ($P < 0.001$), 0.283 ($P < 0.001$), 0.275 ($P < 0.001$), respectively. It shows that the construction of organizational flexibility can help to cultivate and improve the dynamic ability of the park. (ii) The standardized path coefficient between technical flexibility on park performance is: 0.328 ($P < 0.001$); the standardized path coefficients of structural flexibility and cultural flexibility on park performance are 0.063 ($P = 0.482$) and 0.083 ($P = 0.262$) respectively. It indicates that technical flexibility in organizational flexibility has a significant positive effect on park performance, and the effects of structural flexibility and cultural flexibility on park performance are not significant. (iii) The standardized path coefficient between dynamic capabilities and park performance is 0.254 ($P < 0.001$). It indicates that dynamic capability has a significant positive effect on park performance. (iv) The relationship between the dimensions of dynamic capabilities on organizational flexibility and park performance passed the mediation effect test. It indicates that dynamic capabilities play a crucial mediating role as a connection between resources and performance.

Qualitative Analysis

The qualitative data analysis was conducted through semi–structured interviews with two experts, three managers, and five professors. The interview findings provided valuable insights into the relationship between organizational flexibility, dynamic capabilities, and operational performance in Chongqing Cultural Industrial Park.

1. Current Status of Park Operational Performance

Most interviewees stated that operational performance has improved over recent years but varies across different parks. Urban cultural industrial parks perform better compared to those in suburban and rural areas. Some managers highlighted slow development and lack of innovation as major challenges for certain parks.

2. Relationship Between Organizational Flexibility and Dynamic Capabilities

Organizational flexibility lays the foundation for dynamic capabilities, allowing firms to adapt quickly to market changes. Interviewees emphasized that technological flexibility (modernized infrastructure and digital adoption) enhances a park's ability to respond to market shifts. Structural flexibility (adaptive management and governance) was identified as crucial for fostering collaboration and knowledge sharing.

Cultural flexibility (innovation–friendly policies and open communication) was linked to long–term growth and creative competitiveness.

3. The Mediating Role of Dynamic Capabilities

Experts and managers agreed that dynamic capabilities serve as a bridge between flexibility and performance. Firms with higher dynamic capabilities (rapid learning, innovation adoption, and resource reallocation) exhibited better operational performance.

Dynamic capabilities were particularly effective in mitigating risks and uncertainties in a fast–changing market.

4. Challenges and Developmental Issues

Homogenization of cultural parks: Many parks offer similar services, leading to stiff competition without differentiation. Excessive commercialization: Some cultural parks have shifted towards profit–driven activities, losing their cultural essence.Inefficient planning and management: Unclear policies and inconsistent government support affect long–term sustainability.

Conclusion

The study investigated the influencing factors of enterprise dynamic capabilities on the operational performance of Chongqing Cultural Industrial Park. The key conclusions include:

Technical flexibility has a significant positive effect on operational performance, while structural and cultural flexibility impact performance through dynamic capabilities

Dynamic capabilities mediate the relationship between flexibility and performance, demonstrating their role as a bridge in achieving improved outcomes. A proposed model for enhancing operational performance suggests prioritizing technical flexibility, followed by structural and cultural flexibility, with dynamic capabilities amplifying their effects.

Discussion

Theoretical implications:

– The study enriches organizational flexibility theory by clarifying its dimensions and impact on performance.

– It expands dynamic capability theory, highlighting its role in adapting to a competitive environment.

Practical implications:

– Cultural industrial parks should enhance technological flexibility to boost short-term performance.

– Structural and cultural flexibility should be strengthened through dynamic capabilities for sustainable growth.

– Challenges such as resource allocation inefficiencies, lack of market differentiation, and management hurdles need addressing to improve operational effectiveness.

Suggestions & Recommendations

The study acknowledges limitations and suggests areas for future research:

1. Exploring the formation mechanisms of organizational flexibility and dynamic capabilities to improve strategic applications

2. Examining the impact of different park growth stages on flexibility and capabilities, incorporating longitudinal data analysis

3. Investigating interactions among flexibility dimensions to refine theoretical models

4. Using a larger sample size across different regions to enhance generalizability

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