

The Impact Of Urban Community Collaborative Governance And Risk Management On Building Resilience Cities In Zhengzhou City, Henan Province, China

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Abstract

Purpose: This study examines the impact of urban community collaborative governance on constructing resilient cities.

Theoretical framework: This study examines the relationship between several research factors using the Multivariate Cooperation Principle Theory, Risk Theory, and Collaborative Governance Theory. Simultaneously, the interview process is conducted utilizing Grounded Theory as a research methodology.

Design/methodology/approach: This study is focused on analyzing Zhengzhou City, located in Henan Province, China. This study was undertaken by conducting interviews with members of the expert group of Zhengzhou building resilience cities and selecting 6 experts to examine the contents of the interviews. The interview data included in this study was obtained through the audio and video documentation of the researchers' individual, in-person interviews.

Findings: (1) Strengthening the capacity of urban communities for collaborative governance can enhance the capacity of urban communities to risk manage. (2) Strengthening the risk management capacity of urban communities can improve the building resilient cities. (3) Strengthening the capacity of urban communities for collaborative governance can improve resilient cities. (4) The role of risk management between collaborative governance of urban communities and resilient cities is not obvious

Research, Practical & Social implications: The study proposed the implementation of a collaborative governance mechanism that is centered around the involvement of "Government, Corporate, and Social Organizations" to facilitate the development of urban synergy management systems. Create a robust urban assessment system centered around "adaptation, absorption, and capacity for change" to enhance urban resilience and mitigate risk. Building upon these principles, further extensive investigation and examination of the managerial hazards in Chinese cities has been conducted, uncovering the theoretical frameworks that are better suited for the style of urban advancement in China, thereby facilitating the achievement of Collaborative Governance in cities.

Originality/value: This study offers useful insights into the impact of developing resilient cities from the standpoint of collaborative governance of urban communities, which is important for risk management.

Keywords: urban community; Collaborative Governance ; Risk Management; Resilience Cities

1. Introduction

In the context of global urbanization, numerous unpredictable risks have emerged as significant barriers to the sustainable progress of cities. Research on enhancing the synergy ability of urban communities to improve their resilience and coping ability in the face of disasters has emerged as a pressing topic in management and related disciplines. Studying urban resilience construction can offer valuable insights into China's urban development. The process of developing collaborative governance capacity in urban communities is fluid, allowing for effective identification and mitigation of urban management risks. This process also facilitates the creation of resilient cities through a dynamic cycle. Constructing resilient cities is not a static achievement, but rather an ongoing process that evolves over time. (Croese, Green, Morgan, 2020) This stage encompasses the comprehensive process of mitigating and managing urban design, building, and management risks. It involves a continual cycle of implementing control mechanisms across the entire life cycle. The research focus lies in the dynamic adjustment of urban management, which is achieved by a constant process of action and feedback, and is based on the coupling mechanism between the two. Consequently, it is essential to enhance research on the interconnection between urban communities' collaborative governance and resilient cities' development.

Currently, every city is facing a wide range of hazards and risks, with diverse manifestations and means of intervention. Urban community governance epitomizes how cities arrange their catastrophe response processes and requires collaborative governance mechanisms to be in place. (Wang, Yu, 2020) Diversified social construction is the beginning of creating a well-governed city, and at the same time, the process of implementing the synergistic urban social governance mechanism is mainly a systematic process led by the government, assisted by enterprises, and the Involvement of social organizations. (KWON, 2022) Among them, the main thing is that urban community governance is carried out collaboratively, and most of them will make balanced coordination of multiple elements as the core of development, and the joint governance of government, enterprises and social organisations has become the main magic weapon for the construction of the mechanism to cope with disasters. Collaborative governance methods including government, companies and society have been considered as a crucial tool for enhancing the capacity of cities to cope with disasters. (Inomata, 2024) The author believes that governmental organizations are the key factor in promoting building resilience cities in depth, corporate organizations provide economic security for building resilience cities, and social organizations are the catalyst for building resilience cities, and the three are integrated to build collaborative governance of urban communities, strengthening the ability of urban communities to cope with risks, and thus building resilient cities.

This study was conducted in Zhengzhou City, located in Henan Province, China. Firstly, based on the theory of "collaborative governance", a collaborative governance mechanism based on "government, companies and social organisations" is introduced to provide assistance to the construction of diversified urban management mechanism and improve the governance mechanism of urban development. Firstly, based on the "Collaborative Governance" theory, the Collaborative Governance mechanism based on "government, enterprise and social organisations" is introduced, which can help the construction of diversified management mechanism of the city and improve the governance mechanism of urban development. Subsequently, based on the concept of "risk management", we sort out the risks of urban growth and study the elements impacting urban community risk management. Finally, the concept of "resilient city" is put forward, and a resilient city evaluation system based on

"adaptive capacity, absorptive capacity, and transformative capacity" is established to verify the influence of the three factors on urban construction and enrich the research content through practical theories.

2. Research objectives

In the study of urban collaborative governance, the theme of urban community collaborative management is split into government, business, and social organisations according to the theory of "multivariate cooperation principle", social organisations. In this study, we mainly selected the urban community as the core of the regional government, and mainly focus on the government's policy formulation, supervision and inspection of urban community risk management to describe, so this study adopts "Government Regulation" as the research factor affecting building resilience cities. Therefore, this study takes "government regulation" as the research factor affecting developing resilient cities. This study focuses on "corporate capability" as a factor affecting building resilience cities, as it is clear that corporations need to strengthen cooperation with government on an equal footing, and to enhance communication and exchange of information with enterprises and institutions, or with residents and their organisations. Therefore, this study takes "corporate capability" as a component that affects developing resilience cities. The joint participation of different organisations in planning, decision-making, organising production and arranging the implementation of regional governance should give full play to the technical functions and efficiency advantages of different organisations, thus prompting enterprises to focus their energies, mainly on the provision of public goods and living services to the best of their ability. This study shows that social organisations play an important role in the promotion of collaborative governance in cities, and that governments and companies are actively working together with social organisations to identify shortcomings in the governance process and to implement the decisions, regulations, assessments, inspections, and technical feasibility of the governance process. Social organizations need to perform functions such as updating and feedback of information, supervision of governance process, dissemination of policy content, provision of voluntary services, etc., and take the initiative to join the joint work with the city government, enterprises, and other diversified subjects, and then gradually assume or independently carry out the responsibility and obligation to implement public management, forming a virtuous circle of government governance, dynamic modulation of enterprises, and self-governance of social organizations by the three-party linkage control. Therefore, this study defines the term "social organization" as "a social organization". Therefore, this study takes "social organizations Involvement" as a research component affecting developing resilient cities.

In the study of risk management, according to the "risk theory", the process is set into three main procedures of "risk identification, risk evaluation and risk control", which are also called the three principles of risk management. (Gavurova, Kelemen, Polishchuk, 2022) In fact, because identifying risks, evaluating risk levels, and applying control measures are ever-changing, risk management cannot be static, much less consistent. According to the PDCA cycle model, it is required to carry out dynamic control of hazards. Therefore, this study will start with the three aspects of urban risk management, namely, "managing accidents, managing incidents, and managing crises", and follow the three processes of risk management, namely, identification, disposal, and aftercare. Therefore, this study uses "risk management" as a research component that impacts collaborative governance and developing resilience cities.

In the research of constructing resilience cities, based on the notion of "collaborative governance", the urban resilience indicators are set into three dimensions, namely "adaptive ability, absorptive capacity, and capacity for change". Urban resilience and urban resilience are interrelated, mainly reflecting the growth of cities

towards a more idealised construction. The study of urban resilience can efficiently preserve the health and well-being of the urban people. Therefore, "building resilience cities" is chosen as a research factor.

Based on this, this study takes urban community as the research object, and takes community collaborative governance and community risk management as the essential grips to examine how to increase the resilience of the city in the process of urban governance. At the same time, the three influencing factors of community collaborative governance: government regulation, corporate capability and social organisation, are integrated with the factors of urban community risk management and building resilience cities with community risk management and building resilience cities, so as to study the new path of building resilience cities from the aspect of urban governance. Therefore, the primary aims of this study are as follows.

- To determine the impact of collaborative urban community governance on urban community risk management
- To determine the impact of urban community risk management on building resilient cities
- To determine the impact of collaborative urban community governance on building resilient cities
- To determine the impact of collaborative urban community governance on building resilient cities through urban community risk management

3. Research process

3.1 Theoretical support

Grounded theory is a qualitative research method that uses systematic procedures to generate and inductively lead to a grounded theory about a topic. (Oktay, 2012) Typically, the researcher starts from practical observation without defining research hypotheses, and achieves the study objectives from historical documents, practical processes and lessons acquired. Subsequently, the framework is developed by establishing the major linkages between distinct study components from the bottom up.

Based on the grounded theory research approach, this study observes the process of constructing resilient cities and captures the topic of "risk management in urban communities plays a key role in building resilient cities". (Elkhidir, Mannakkara, Henning, TWilkinson, 2023 ; Godschalk, 2003) A practical research of the risk management process in urban communities indicated that improving collaborative governance mechanisms in urban communities is the key approach of enhancing urban risk management. (Osei-Kyei, Ampratwum, Tam, Komac, Narbaev, 2024) The issue of collaborative urban governance was set as "government, corporate, and social organizations" to study the interrelationships between the five variables.

To sum up, this study mainly adopts qualitative research, using grounded theory, through the expert interview method of analysing the method to obtain data, to verify whether the research objectives can be achieved, so as to deeply dig out the problems in the study and find out the reasons for the existence of the problems.

3.2 Interview subjects

The research core of this study is the relationship between urban community collaborative governance and resilient city, the researcher placed the research object in Zhengzhou City, Henan Province, China. through the resilient city building experts, to do an evaluation of Zhengzhou City resilient city construction, in order to judge if the research objectives can be realized.

For this reason, the interviews were conducted with members of the Resilient Cities Expert Group. The Zhengzhou Municipal Government places significant attention to the construction of resilient cities, and has built

up a city construction think tank according to national laws, which includes a "Resilient Cities Special Group". The resilient cities expert group is composed of six prominent Chinese experts and six general scholars. In this study, three professionals and three scholars were selected from the resilient cities group for interviews in order to acquire more thorough data from many dimensions.

3.3 Selection of interviews

In the interview process, "one-on-one" and "face-to-face" interviews are generally employed to carry out the interviews. The researcher puts forward the questions according to the interview framework, and the respondents make pertinent replies and express their own perspectives according to their own assessments of the questions.

In the course of the interviews expressing their own thoughts, they need to clearly identify whether the interrogated questions are valid or not, and convey the relevant opinions and suggestions. In this study, the key words will be extracted and coded based on the interviewees' linguistic expressions, so as to construct the data statistics, and the data will be evaluated to further check whether the objectives can be realized or not.

3.4 Outline of interview

Based on the research, it can be noted that the interviews covered three important issues, namely "urban community collaborative governance, risk management and building resilience cities". Meanwhile, urban community collaborative governance involves three components, namely "government regulation, corporate capacities, social organisation involvement". and social organisation involvement". Therefore, there are five important aspects in this interview, which are "Government Regulation (GR), Corporate Capabilities (CC), Social Organisation Involvement (SOI), Risk Management (RM) and Building Resilience Cities". Management (RM) and Building Resilient Cities (BRC)".

Based on this, correspondingly, this study designed the interview outline as a three-level scale, which largely covers the Objective layer, Parametric Layer and Indicator layer. Among these, the Objective layer is to reflect the four aims of this study. The Parametric Layer is to reflect the 10 contents in this study, and the Indicator Layer is the specific interview questions, which are summarised by the researcher based on the historical literature to derive the substance of the questions. The precise content is detailed in the table below.

Table 3.1 Interview Outline Form

Objective layer	Parametric Layer	NO.	Indicator layer
To determine the impact of collaborative urban community governance on urban community risk management	Strengthening the capacity of government regulators can contribute to the level of risk management in urban communities	NO.1	Do you think that increased government oversight of communities can have a positive impact on community risk management?
	Strengthening the capacity of corporate can contribute to the level of risk management in urban communities	NO.2	Do you think that companies improving their capacity to respond to emergencies can have a positive impact on risk management in the community?
	Strengthening the capacity of social organization involvement can contribute to the level of risk management in urban	NO.3	Do you think strengthening the involvement of social organizations can have a positive impact on risk management in the community?

	communities		
To determine the impact of urban community risk management on building resilient cities	Strengthening the capacity of risk manage can contribute to buliding resilient cities	NO.4	Do you think strengthening NO.4community risk management capacity can have a positive impact on building resilient cities?
To determine the impact of collaborative urban community governance on building resilient cities	Strengthening the capacity of governments regulate can contribute to the level of building resilient cities	NO.5	Do you think strengthening government regulation of communities can have a positive impact on building resilient cities?
	Strengthening the capacity of corporate can contribute to the level of building resilient cities	NO.6	Do you think strengthening the capacity of companies themselves can have a positive impact on building resilient cities?
	Strengthening the capacity of social organization involvement can contribute to the level of building resilient cities	NO.7	Do you think strengthening the involvement of social organizations can have a positive impact on building resilient cities?
To determine the impact of collaborative urban community governance on building resilient cities through urban community risk management	Risk management key point the relationship between governmental regulation and building resilient cities	NO.8	Do you think the government can promote resilient cities by strengthening risk management in the process of community wind management monitoring?
	Risk management key point the relationship between corporate capabilities and building resilient cities	NO.9	Do you think companies can promote resilient cities by strengthening risk management in strengthening their own capacity?
	Risk management key point the relationship between social organization involvement and building resilient cities	NO.10	Do you think social organizations can promote resilient cities by strengthening risk management in the process of expanding their own participation?

(Source: based on research)

3.4 Principles of interview coding

Grounded theory employs data coding, namely Open Coding, as a primary method during the research process. (Birks & Mills, 2022)The language of the subjects being studied must be retrieved, conceived, and abstracted into linguistic expressions. These expressions are then contrasted and transformed into data that represents discrete and fixed-distance information. Simultaneously, the data underwent a process of analysis, restructuring, manipulation, and integration to establish benchmark values for the purpose of testing hypotheses. The coding provided is as follows.

Table 3.2 Table of Open Codes

NO.	Coding Strategy	Language Content	Key Word	Coded Data
1	Classification type	Language expression presents affirmative vocabulary	Yes, can, may	1
2		Language expressions presenting negative vocabulary	No, may not, can not, have not	0
3	Contrast type	Language expressions present a comparison of two or more, and the dominant party state	Better, closer, better, more advanced, most importantly	1
4		Language expressions presenting a comparison of two or more, and the inferior party state	No better, no more perfect, can't be more, doesn't matter	0
5		Combination	Language expressions	Only, to be able to,

6	type	presenting prerequisites	affirmative	based on the conditions	More than, not only, and	0
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(Source: A study on the application of the three-stage coding of rootedness theory to subject-matter word extraction) (Wang Yanmeng, 2018)

1. After coding, it was possible to visualize the content of the questions that each expert answered in the interview and to extract the keywords according to the content of the answer to determine the score value of the statement. At the same time, the expert interviews were described statistically according to the score of each statement. Therefore, this study mainly applied to the weighted mean. (Palley, Satopää, 2023)

$$\bar{X} = \frac{\sum_{i=1}^n X_i f_i}{\sum_{i=1}^n f_i} \tag{Equation 3-1}$$

2.

3. It can be seen through this study that a total of 6 experts were researched in this study, therefore $f_1 = f_2 = f_3 = f_4 = f_5 = f_6 = 1$, which most ultimately leads to the formula.

$$\bar{X}_i = \frac{X_1 + X_2 + X_3 + X_4 + X_5 + X_6}{6} \tag{Equation 3-2}$$

Based on this, since a Weighted Mean (WM) was used, it was able to determine. When $\bar{X}_i = 1$, Then Proof 6 is that the experts all expressed an affirmative tone on the question, and therefore were also able to determine that the hypothesis could be established. When $0.5 \leq \bar{X}_i < 1$, Then it is proved that three or more experts expressed an affirmative tone on the question, and although there are some experts who do not approve of the hypothesis, the hypothesis can be found to be valid, according to the principle of large numbers, when more than half of the experts think that the hypothesis is valid. When $0 \leq \bar{X}_i < 0.5$, Then, if it is proved that less than 3 experts expressed an affirmative tone on the question, the hypothesis is not valid and the goal cannot be achieved.

3.5 Interview content data coding

The researchers engaged in dialogue with the experts, and subsequently arranged and categorized the information obtained from the interviews. The interview contents were encoded and the relevant data were sorted based on the substance of the interview and the principle of encoding

Table 3.3 Interview Content Coding Table

Indicator	Expert 1			Expert 2			Expert 3			Expert 4			Expert 5			Expert 6		
Code	Coding Strategy	Language Content	Code	Coding Strategy	Language Content	Code	Coding Strategy	Language Content	Code	Coding Strategy	Language Content	Code	Coding Strategy	Language Content	Code	Coding Strategy	Language Content	
N	Clas	Sure	1p	Clas	Sure-	1p	Clas	Sure	1p	Clas	Sure	1p	Cont	Dom	1p	Cont	Dom	1p

O.1	sific ation type	-fire Wor ds	oi nt	sific ation type	fire Word s	oi nt	sific ation type	-fire Wor ds Affir	oi nt	sific ation type	-fire Wor ds Affir	oi nt	rast type	inant Posi tion	oi nt	rast type	inant Posi tion	oi nt
N.O.2	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Cont rast type	Domi nant Posi tion	1p oi nt	Com binat ion type	mati ve prer equi sites	1p oi nt	Com binat ion type	mati ve prer equi sites	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt
N.O.3	Com binat ion type	Affir mati ve prer equi sites	1p oi nt	Cont rast type	Domi nant Posi tion	1p oi nt	Com binat ion type	mati ve prer equi sites	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Clas sific ation type	Neg ative Wor ds	0p oi nt
N.O.4	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Clas sific ation type	Sure -fire Word s	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Cont rast type	Dom inant Posi tion	1p oi nt	Com binat ion type	Affir mati ve prer equi sites	1p oi nt	Cont rast type	Dom inant Posi tion	1p oi nt
N.O.5	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Com binat ion type	Affir mativ e prere quisit es	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Com binat ion type	Affir mati ve prer equi sites	1p oi nt	Com binat ion type	Affir mati ve prer equi sites	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt
N.O.6	Com binat ion type	Affir mati ve prer equi sites	1p oi nt	Com binat ion type	Affir mativ e prere quisit es	1p oi nt	Com binat ion type	Affir mati ve prer equi sites	1p oi nt	Com binat ion type	Affir mati ve prer equi sites	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Com binat ion type	Affir mati ve prer equi sites	1p oi nt
N.O.7	Clas sific ation type	Neg ative Wor ds	0p oi nt	Com binat ion type	Affir mativ e prere quisit es	1p oi nt	Cont rast type	Dom inant Posi tion	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Clas sific ation type	Neg ative Wor ds	0p oi nt
N.O.8	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Clas sific ation type	Sure -fire Word s	1p oi nt	Com binat ion type	Affir mati ve prer equi sites	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt
N.O.9	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Com binat ion type	Affir mativ e prere quisit es	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Com binat ion type	Affir mati ve prer equi sites	1p oi nt	Clas sific ation type	Sure -fire Wor ds	1p oi nt	Clas sific ation type	Neg ative Wor ds	0p oi nt
N.O.10	Clas sific ation type	Neg ative Wor ds	0p oi nt	Cont rast type	Disa dvant aged Posi tion	0p oi nt	Com binat ion type	Affir mati ve prer equi sites	1p oi nt	Clas sific ation type	Neg ative Wor ds	0p oi nt	Clas sific ation type	Neg ative Wor ds	0p oi nt	Clas sific ation type	Neg ative Wor ds	0p oi nt

(Source: prepared by the researcher on the basis of interviews)

In this study, based on the above table, the following table was calculated by extracting the data from the above table and applying equation 3-2.

Table 3.4 Coded Data Statistics

Indicator layer Code	Expert Codes						Indicator layerMean
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	
NO.1	1	1	1	1	1	1	1.0
NO.2	1	1	1	1	1	1	1.0
NO.3	1	1	1	1	1	0	0.8
NO.4	1	1	1	1	1	1	1.0
NO.5	1	1	1	1	1	1	1.0

NO.6	1	1	1	1	1	1	1.0
NO.7	0	1	1	1	1	0	0.7
NO.8	1	1	1	1	1	1	1.0
NO.9	1	1	1	1	1	0	0.8
NO.10	0	0	1	0	0	0	0.2

(Source: prepared by the researcher on the basis of interviews)

3.5 Drawing Interview Conclusions

Based on the aforementioned studies, it is evident that relevant information can be acquired through expert interviews. By coding the interview contents, abstract language expressions can be transformed into tangible data. Additionally, by observing changes in data and comparing different sets of data, the feasibility of assumptions can be analyzed.

Table 3.5 Interview Findings

Objective layer Code	Objective layer	Parametric Layer		Indicator layer
	Mean	Hypothesis results	validation	Results of target completion
NO.1	1.0	Supported		Yes
NO.2	1.0	Supported		Yes
NO.3	0.8	Supported		Yes
NO.4	1.0	Supported		Yes
NO.5	1.0	Supported		Yes
NO.6	1.0	Supported		Yes
NO.7	0.7	Supported		Yes
NO.8	1.0	Supported		Yes
NO.9	0.8	Supported		Yes
NO.10	0.2	Not-Supported		No

(Source: prepared by the researcher on the basis of interviews)

4. conclusions

4.1 Strengthening the capacity of urban communities for collaborative governance can enhance the capacity of urban communities to risk manage

Research examining the connection between collaborative governance in urban communities and risk management has primarily relied on the Synergistic Governance Theory as a framework for investigation.

The "Community-based Disaster Risk Management (CBDRM)" approach has been a prominent subject of research in recent years. Previous research on the correlation between urban community collaborative governance and risk management has primarily relied on the Synergistic Governance Theory, which serves as a starting point for the study. (Zhou , Zhang, 2013)) From the standpoint of collaborative governance in the community, the primary constituents of the community comprise three principal entities: the government, corporations, and social organizations. First and foremost, the government assumes the function of the administrator. China's government might be seen as a public service-oriented organization in terms of its operational system. (Chen, Lu, 2023) Thus, from the standpoint of coordinated community governance, the operating processes of community governments are similarly public service-oriented. Hence, the government's monitoring mechanism plays a crucial role when executing public service activity. Therefore government regulatory is picked as a research factor in this study. Secondly, companies perform the role of resource providers. From the point of view of the condition of companies in society, companies are profit-making organizations. (Zhang, Zhao, 2021) Therefore, from the perspective of community collaborative governance, companies still have strong profitability in the community, and these profits can be used as tax revenue to provide local community management, as well as to provide greater convenience for the people in the local community to live and work. Therefore, the capacity of the company itself is extremely significant, especially its risk management capacity, which is highly relevant to the community's risk management. Finally, social organisations perform the role of suppliers of skills. From the point of view of the existence of social organisations in community management, social organisations are usually comprised of volunteers and are also non-profit voluntary organisations of citizens. (Zhang, Zhu, 2022) These organizations frequently have good risk management abilities, have extremely strong linkages with government and business,

and can provide additional facilities to the local population. Therefore, the presence of social organizations is particularly vital for community risk management. Based on this, this study will analyze the three factors of "government regulation, corporate capability, and social organizations involvement".

Firstly, in the course of research on the relationship between government regulation and risk management, it was found that there is a large correlation between the two, and there is a mutually reinforcing relationship: the stronger the government regulation, the stronger the capacity of community risk management. Therefore, community governments need to develop community risk management capacity by enhancing their own supervisory and managerial capacity. However, in this study, just a one-way analysis was carried out, and there is a correlation between the two. Strengthening government regulation can increase the community's risk management capacity, but the reverse is not necessarily true. Based on this, this study recommends that regulation can be carried out through three aspects: community administration, community services, and community benefit guarantee. Through the study of interviews, it can be shown that there are huge flaws in the process of actual facilities. There are mainly backward community administration mechanism, insufficient community service capacity, and less community benefit guarantee facilities. These are huge challenges for government regulation.

Secondly, in the course of doing research on the relationship between corporate competence and risk management, it was determined that there is a greater correlation between the two and that there is a mutually reinforcing relationship. In other words, the higher the business capabilities, the stronger the community's Risk Management capability. Therefore, organizations need to consistently expand their business capabilities, profitability, production and management capacities, etc., in order to enhance the community's risk management capabilities. However, in this study, only a one-way study was undertaken, and there is a correlation between the two, where boosting Corporate Capabilities enhances community Risk Management competence, but the flip result does not necessarily hold true. Based on this, this study proposes that companies in the process of improving their own capabilities can be material security capacity, production and management capabilities and emergency response capability. analysis through the interviews shows that the specific implementation of the There are also big problems in the process. The main existence of material security capacity can not meet the needs of the community, production and management capabilities can not provide sufficient services for community residents, emergency response capabilities to be further improved. These are also major challenges to the enhancement of corporate capabilities.

Finally, in the course of doing research on the relationship between social organisations involvement and risk management, it was revealed that there is a larger correlation between the two and that there is a mutually reinforcing relationship. That is to say, improving social organisation Involvement can effectively improve the community risk management capacity. Therefore, it is vital to continuously increase the types and numbers of social organisations, so as to continuously strengthen the engagement of social organisations. At the same time, it is also necessary to strengthen the sense of social responsibility of social organisations, as a way to promote the continuous participation of community residents in social organisations, and social organisations are also able to continuously participate in the work of social risk management, to provide a better guarantee of skills for the development of the community. However, in this study, just a one-way analysis was carried out and there is a correlation between the two, where enhancing social organisation Involvement competencies can enhance risk management competencies, but the contrary conclusion does not usually hold true. Based on this, this study argues that social organisations essentially feature three aspects: community resident council, community volunteer team community citizen self-defense team. From the examination of expert interviews, it can be determined that social organisations Involvement has various challenges. Mainly there are community resident council in the protection of the rights and interests of citizens do not do in place, community volunteer team business level capability gap is wide, community citizen self-defence team function to play insufficient. These are key problems for strengthening social organisations Involvement.

In summary, urban communities are able to increase the degree of risk management by enhancing the collaborative governance model. Most notably, the degree of risk management in urban communities can be raised through three factors, namely, enhancing government oversight, strengthening the competence of corporations and strengthening the participation of social groups.

4.2 Strengthening the risk management capacity of urban communities can improve the building resilient cities

Studies studying the relationship between risk management and developing resilient cities have generally used the Accident Causation Theory, a theory that provides the researcher with an entrance point for the study.

Building Resilient Cities is to strongly advocate community residents to actively participate in community risk management, so as to enhance the community's ability to cope with risk, and through enhancing the community's ability to cope with risk to enhance the city's overall ability to cope with risk, so as to build a sustainable community building and city building. (Fan,Yan,Wang, Guo,2022) The above is the fundamental goal of building resilient cities. Based on this, this study takes community residents as the object of study and risk management as a factor affecting the relationship between government regulation and building resilient cities to provide a reference value for the construction of modern cities.

Through the analysis of interviews, it can be seen that there is a correlation between risk management and developing resilient cities, and it indicates a positive association. In other words, enhancing community risk management can improve building resilience cities, and community risk management can be viewed as a key component influencing building resilience cities. However, in this study, only a one-way analysis was carried out, and there is a link between the two, in that enhancing risk management capability can raise the level of building resilient cities, but the contrary conclusion does not necessarily true. Based on this, this study argues that risk management is largely separated into three key areas: government, enterprises and social groups. Through the validation process of the first aim, it can be shown that all three subjects can strengthen the community risk management, and can also strengthen the community's governance capacity, and therefore play an essential role in constructing resilience cities. However, in the process of community risk management, there are some challenges. The key concerns are that government monitoring is not strong enough, the emergency response capacity of firms needs to be enhanced, and the participation of social groups needs to be continuously strengthened. These are the primary issues for strengthening the ability of community risk management.

4.3 Strengthening the capacity of urban communities for collaborative governance can improve resilient cities

A study studying the relationship between urban community collaborative governance and developing resilient cities, largely utilizing the System Dynamics Model, provides value for the promotion of sustainable urban development and an entrance point for academics to do research. Built resilient cities emerged from the conventional notion of urban safety governance, which is centered on how cities can remain highly resilient, stable and flexible under the rapid rise of urbanisation. (Hu,Xiao ,2022) In the process of constructing resilience cities, the most crucial aspect is community governance. Only with good community governance can building resilience cities be done properly. Combining the three subjects of community governance "government, enterprises and social organisations", it may be considered that there is a certain relationship between diverse components. Among them, the government is the major body of the proposed Building Resilient Cities, the government to perform a good job of community oversight, may give value for Building Resilient Cities. Among them, enterprises are the important hand of building resilient cities, enterprises can provide enough material support for building resilient cities, and provide sufficient assurance for building resilient cities. Social organisations are an objective element of building resilient cities, as they contribute various professional skills to urban construction, make up for the community management mechanism that the government is not involved in, and also make up for the government's missing responsibilities in urban construction. Based on this, the three factors of "government regulation, corporate capability and social organisations involvement" will be examined.

First of all, in the research on the relationship between government regulation and building resilient cities, it is found that there is a large correlation between the two, and there is a mutually reinforcing relationship between them, that is to say, the government strengthens its own regulatory capacity and supervision to help strengthen building resilient cities. That is to say, the government enhances its own regulatory power and strength, which can help to boost developing resilient cities. the government not only plays a leadership role in constructing resilient cities, but also plays a supervisory and management function, so in the process of the government constantly improving its own regulating role, it can effectively enhance the level of building resilient cities. However, in this study, only a one-way analysis was carried out, and there is a link between the two, in that strengthening the ability of government regulation can raise the level of developing resilient cities, but the converse conclusion does not necessarily hold true. From the analysis of the interviews, it can be seen that resilient cities risk prevention mostly relies on government monitoring and regulation. To give full play to the government's ability to avert dangers in risk-free situations, it mainly relies on the government's power of prediction, publicity and education, and self-adaptation. Therefore, in the process of developing resilient cities, the government also faces significant issues. The key problems are that the government's self-adaptive capability is insufficient, its ability to predict needs to be enhanced, and its ability to publicise and educate has to be reinforced. These problems will be a tremendous challenge for the government in the process of developing resilient cities.

Secondly, in the research on the relationship between corporate skills and developing resilient cities, it was revealed that there is a larger correlation between the two, and there is a mutually reinforcing relationship. That

is to say, boosting corporate capabilities can effectively enhance the ability to develop resilient cities. Companies are an important aspect of cities, where they can bring additional jobs, assist the development of the city and contribute to the building of the city. Therefore, in the process of enterprise development, it can provide aid for developing resilient cities. However, in this study, just a one-way analysis was carried out, and there is a correlation between the two. Improving corporate capabilities can raise the level of developing resilient cities, but the contrary conclusion is not necessarily true. From the analysis of the interviews, it is obvious that constructing resilient cities requires considerable assistance from corporations. In the process of risk management, the ability of companies to react swiftly, their ability to resist pressure and their ability to absorb and adapt will all effect the creation and growth of cities. Therefore, in the process of developing resilient cities, enterprises too have huge issues. The main issues are the ability to react in the process of risk management, the ability to withstand the impact of urban disasters, the ability to absorb and adapt to the new challenges brought by the process of urban change and rapid development, and the ability of enterprises to absorb and adapt to the new challenges brought by the process of urban change and rapid development. These challenges will be a huge challenge for corporations in the process of constructing resilient cities.

Finally, in the research on the relationship between social organisation involvement and constructing resilient cities, it was revealed that there is a substantial correlation between the two, and that there is a mutually reinforcing relationship between the two. That is to say, enhancing the engagement of social organisations can effectively raise the level of developing resilient cities. People are the smallest unit in the construction of the urban structure, and a huge number of people spontaneously create social groups. These organisations, to a certain extent, make up for the lack of government and enterprises in the construction of the city, social organisations have assumed a huge sense of social responsibility, and are able to influence the construction and development of the city from the side of the city, and also able to influence the building of resilient cities. In the process of improving community residents' participation in social organizations and strengthening social organisation involvement in community management, the influence on constructing resilient cities is also expanding. However, in this study, only a one-way study was carried out, and there is a correlation between the two, and the enhancement of social organisational involvement can enhance the level of creating resilient cities, but the converse conclusion does not necessarily hold. From the analysis of the interviews, it is obvious that constructing resilient cities requires the effective cooperation of social groups. The participation of social organisations is vital in both risk management and risk recovery, and the contribution of social organisations to risk occurrences cannot be overlooked. Especially in the post-disaster process, the resilience of the city, the summarisation and diffusion of experience in disaster management, and the provision and protection of post-disaster resources all give a powerful push for city building. Therefore, in the process of constructing Resilient Cities, there are also huge difficulties in the society. The key concerns are limited reaction capability of social organisations, poor professional skills and insufficient dissemination of experience.

In summary, urban communities may promote resilient cities by increasing collaborative governance. Most crucially, urban communities may build resilient cities through three aspects: enhancing government regulation, strengthening business ability and strengthening the participation of social groups.

4.4 The role of risk management between collaborative governance of urban communities and resilient cities is not obvious

A study studying the relationship between risk management in urban community collaborative governance and developing resilient cities, principally employing risk theory, provides the researcher with an entrance point for the study.

Risk management is an important aspect of urban building and an important part of maintaining the safety of urban populations. The implementers of risk management are governments, corporations and social organisations, and the ultimate purpose of risk management is to raise the resilience of cities and strengthen the level of developing resilient cities. In the process of implementing risk management, the government plays a supervisory role, enterprises give protection, and social groups provide technical support, which are interrelated to each other to form a flawless urban risk management system. Based on this, the three factors of "government regulation, corporate capability and social organisations involvement" will be examined.

First of all, risk management in government regulation and developing resilient cities in the interaction between the research method discovered that risk management and the two have a larger correlation, and there is a mutually reinforcing relationship. The government can effectively increase the building level of resilient cities by enhancing the regulatory capability of risk management in the community. In developing resilient cities, government regulation is vital, and risk management is equally indispensable to government regulation. Therefore, risk management can serve an intermediary function between the government and developing resilient cities. From

the analysis of the interviews, it can be shown that the intermediate position is predominantly reflected in the government's risk screening and risk identification monitoring for the community. In the process of developing resilient cities, the government's value orientation can provide goals for the growth of the community. The government's supervisory function might provide aid to community development. The government needs the community to ensure the safety of the people, the community should carry out Risk Management work in time, the community to do a good job in risk management work can effectively enhance the city's ability to control the risk, may enhance constructing resilient cities. Consequently, risk management plays a facilitating function between the two. Therefore, risk management is playing a part in encouraging between the two.

Secondly, risk management in the corporate capabilities and developing resilient cities relationship research process discovered that risk management and the two have a better correlation, and there is a mutually reinforcing link. Companies can increase their risk management ability by increasing their own capabilities, which can successfully avoid the occurrence of risks in the enterprise. At the same time, enterprises can offer more money and resources to the community in the process of developing their own capacity, so as to boost the community's ability to manage risks, and the resilience of the city will also be improved. In the process of developing resilient cities, corporate capabilities represent the social value of the enterprise, and the ability of the enterprise to contribute to the community and the city, which also reflects the potential capacity of building resilient cities. Therefore, risk management serves an intermediary role between corporate competencies and developing resilient cities. From the analysis of the interviews, it can be seen that the role of risk management is essentially contained in the two aspects of the development capacity of the firm and the ability of developing resilient cities. In the process of building resilient cities, the development of the enterprise is the key content of the city construction, how to maintain the profit of the enterprise at the same time, but also to allow the enterprise to contribute to its own value, and to maintain a balance of the two sides, is the difficulty of the development of the enterprise. The stronger the business capabilities and the stronger the contribution, the stronger the community's risk management competence, and the better the creation of resilient cities. Therefore, risk management plays a facilitating function between the two.

Finally, risk management has identified no association between social organisations involvement and developing resilient cities, and risk management has not played a role in the relationship. The important role of social organisations is to connect government, business and individual inhabitants. Social organisations serve a fundamental significance as a bridge and a link in community management. Social organisations have the features of excellent professionalism, extensive service content and flexible work. These qualities also determine the more sophisticated structure of the composition of social organisations. The participation of community residents is considerably more variable, and it is not viable to generalise about how much they can contribute to community management. Social organisations make up for what the government cannot accomplish and what enterprises cannot do. Therefore, there are considerable obstacles and uncertainties in validating how social organisations play their role and value. In the course of interview analysis, it was found that from the standpoint of risk management, the higher the degree of Social Organisation Involvement, the higher the level of Risk Management in the community. From the standpoint of constructing resilient cities, the higher the degree of social organization involvement, the stronger the professional abilities of the social organisation, the wider the range of professional risk management involved, and the more it is able to play a role. The higher the degree of Social Organisation Involvement, the stronger the professional capabilities of the social organisation, and the wider the scope of professional Risk Management, which can play a vital role in Building Resilient Cities. However, risk management, as an intermediary component, does not play an intermediate orientated function, and social organisation involvement cannot assist creating resilient cities by enhancing risk management. Social Organisation Involvement and building resilient cities does not play a mediating function.

In summary, risk management does not play a substantial role between urban community collaborative governance and developing resilience cities, and has minimal effect on either element. risk management may strengthen resilience cities by boosting Risk management may promote resilient cities by enhancing government regulation and corporate capabilities. However, it cannot promote resilient cities by enhancing the capacity of social organisations involvement.

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