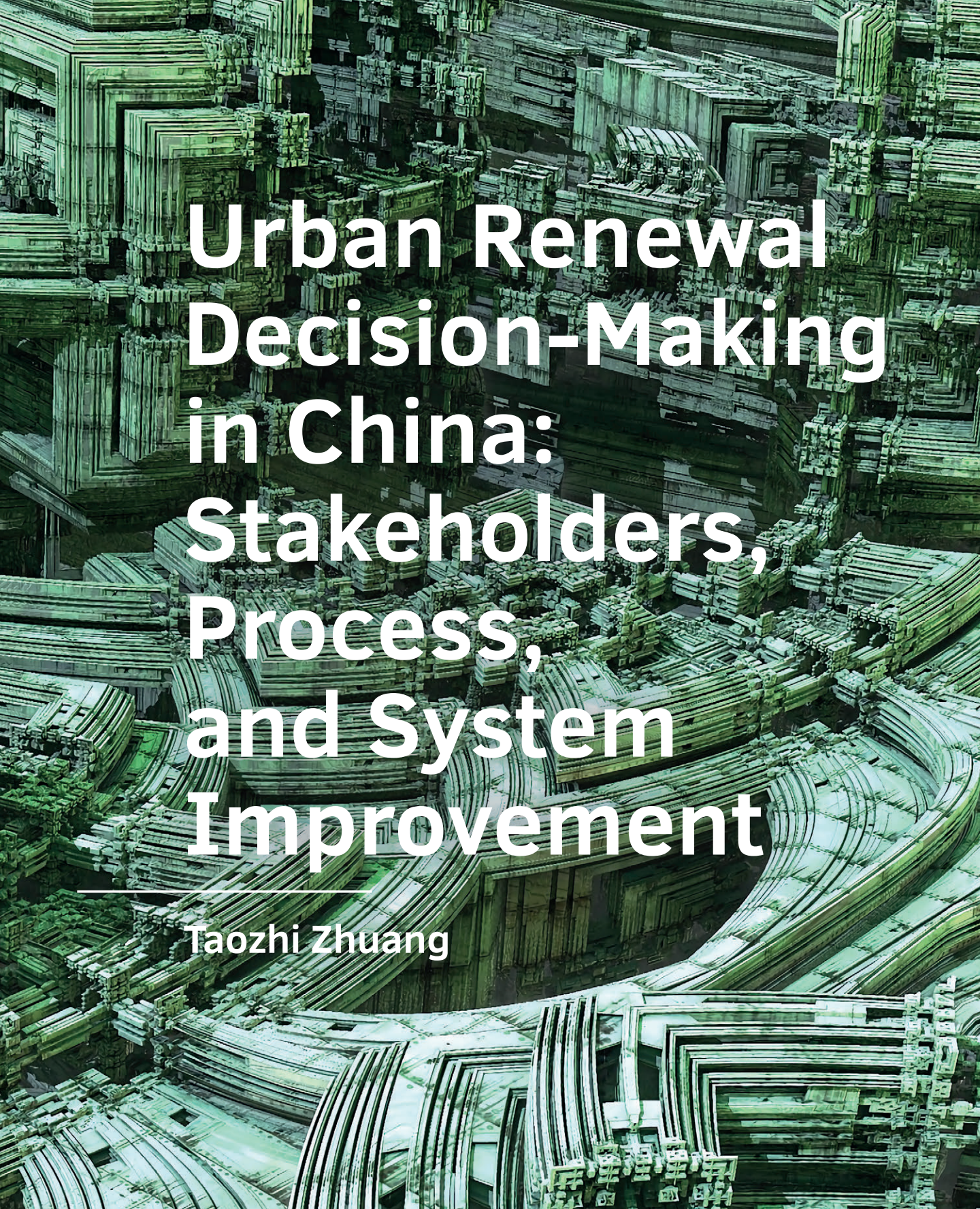

Urban Renewal Decision-Making in China: Stakeholders, Process, and System Improvement

Taozhi Zhuang

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Urban Renewal Decision-Making in China: Stakeholders, Process, and System Improvement

Dissertation

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chair of the Board for Doctorates
to be defended publicly on
7, October 2020 at 10:00 o'clock

by

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Summary

Since the reform and opening-up policy in the late 1970s, China has experienced high-speed urbanization and economic growth. To meet the growing rigid demand of urban housing, urban renewal has played a significant role, which significantly promotes the urban prosperity in China. However, at the same time, many problems occurred through large-scale urban renewal projects. To avoid unintended consequences that occurred in urban renewal, how these decisions were made can be one key focus (Juan et al. , 2010, Maginn, 2007, Mayer et al. , 2005, Wang et al., 2014). However, since it lacks relevant laws and regulations explicitly guiding urban renewal decision-making in China, many decisions were made in a relatively rough way, which is criticized for lacking transparency and equity (Liao, 2013). In this context, to deal with the problems, urban renewal in China has stepped into the new stage of sustainability, changing from the old mode of only focusing on the physical redevelopment, to the new mode of considering more social factors such as participatory methods, social management (CSUS, 2019). To better achieve the goal of sustainability, this thesis aims to deepen the understanding of urban renewal decision-making in China and contribute to recommend strategies to improve the system. It answers the following main research question: What are the problems of current urban renewal decision-making in China, and what strategies can address the problem?

Based on the participatory decision-making theory and the characteristics of urban renewal, a conceptual framework is built to achieve the aim of this research. In the framework, there are three vital elements in urban renewal decision-making to be understood: the stakeholders, the decision-making process, and the laws and regulations. The concept of “stakeholder” here consists of two dimensions. One is the different stakeholders’ expectations, which also refers to their interests and perceptions of the urban renewal project. Another one is the status of stakeholders’ participation, which includes their different roles, characteristics, and cooperation network in the decision-making. The exploration of the decision-making process consists of the efficiency and effect of different decision-making stages and detailed works. Through the in-depth study of the stakeholders and process of urban renewal decision-making, the functions, comprehensiveness, and the impact of laws and regulations (the third element) can also be revealed. Since Chongqing demonstrates the issue of urban renewal at stake very well and is accessible for the data collection. Therefore, Chongqing was selected as the case city in this thesis.

Based on the research framework, this research firstly conducted an empirical study of stakeholders' expectations in urban renewal projects. It identifies and analyzes the possible expectations of the main stakeholder groups: government sectors, consulting parties, the general public (citizens outside the renewal area), in-situ residents in rehabilitation projects, and in-situ residents in redevelopment projects. In-depth interviews with various stakeholders and questionnaire surveys reveal that there is no pair of stakeholders who hold similar expectations in urban renewal projects. Due to ignorance and misunderstanding, conflicts among stakeholders often emerge during the urban renewal process. Regarding the social dimension, it is found that maintaining social stability is a top concern of the government. However, this is disagreed by many other stakeholders. As a valuable social asset, protecting the existing social network in the community is extremely important for in-situ residents. However, it is almost ignored by both government and consultants. In view of the environmental dimension, even though building energy efficiency is of concern for the public and the in-situ residents, it is not always on the agenda when conducting urban renewal projects since it is relatively less important for governments and consultants. From the economic perspective, it is not surprising that all stakeholder groups expect economic benefits, but these expectations have different standpoints. The government and the general public are more concerned about local economic development, but the in-situ residents mostly pursue their private economic interests. This disparity may challenge the core value of "public interest" in China. Moreover, the results also provide evidence for a huge disparity of expectations between in-situ residents in the two types of urban renewal projects (rehabilitation and redevelopment). Staying in the same neighborhoods or moving out to a new one strongly influences the residents' perceptions. To improve the understanding of diverse needs in different projects, it will be beneficial to hear more voices from the affected groups.

To fully understand the stakeholders, it also requires the exploration of stakeholder participation in urban renewal decision-making in the second step of this research. Therefore, Stakeholder Analysis and Social Network Analysis were complemented as the research methodology. Data were collected through in-depth interviews and a questionnaire survey. Taking the Yuzhong District in Chongqing as the case area, this research identifies 36 stakeholders participating in the urban renewal decision-making process, representing eight different stakeholder groups. The results show the high complexity of stakeholder characteristics and the interaction network between them during urban renewal decision-making. Since most of the urban renewal projects in China are government-led, governments play a dominant role in the decision-making process. However, too many governmental sectors in different administrative levels involved in the process also pose significant barriers to cooperation. The informal participation of developers can guarantee future

investment in the potential renewal area. It reduces the financial risk of government, but also create a side effect on the outcomes (e.g., developers' interference on planning). Generally, the lack of public participation in decision-making is seen as the primary cause of conflicts between the public and other stakeholders. Nevertheless, most stakeholders, including the public themselves, do not believe that promoting public participation is significant to the project success. This is because different stakeholders hold negative perceptions of others.

After the exploration of stakeholders as the first and second steps of this research, the investigation of the urban renewal decision-making process is conducted in the third step. Transaction costs theory is adopted to improve the understanding or decision-making process from the New Institutional Economics perspective. It provides a specific perspective to look into the efficiency and equity of policy instruments, perceive unintended consequences, design more practical policy instruments, and provide the basis to include various aspects of the institutional environment (Garrick et al. , 2013, McCann, 2013, Qian et al. , 2012, Shahab et al. , 2018). The research focuses on the stakeholder groups of municipal government, district government, local administrative organizations, and the consulting parties, because these groups are highly and actively involved in the administrative process of urban renewal decision-making. Based on transaction costs theory, an analytical framework is established to identify and analyze transaction costs borne by different stakeholder groups in all four decision-making stages. The results of in-depth interviews show that many transaction costs exist in the administrative process of urban renewal decision-making. The distribution is uneven in terms of different stages and stakeholder groups. Moreover, the huge amount of works of negotiation and coordination account for a significant part of the total transaction costs. The primary cause of the high-level transaction costs is the current institutions of urban renewal decision-making, includes three aspects. The first is that different decision-making stages are strictly separated. It leads to a lack of feedback loop and creates loopholes in the decision-making process. The second is the lack of guidance on project planning. Currently, the purpose and elements of a project plan are clear to all stakeholder groups, but how to make the project plan is not explicit, which restricts the plan-making in many circumstances. The third aspect is the lack of a cross-sector cooperation mechanism. Each stakeholder has to comply with much government planning and specific requirements of other stakeholders. When an issue involves many sectors, cooperation may become more complicated and cause misunderstandings and conflicts.

The last step of the research is to propose a strategic framework to deal with the problems of urban renewal decision-making. Following the conceptual framework of this research, and based on the results of the first, second, and third steps,

four major problems in current urban renewal decision-making are concluded: stakeholder capacity, stakeholder perceptions, process, and legislation. Under the major problems, there are 14 sub-problems in total. Moreover, nine recommended strategies for tackling the complicated problems are concluded. Analytic Network Process (ANP) is adopted in this research to determine critical problems and strategic alternatives. Based on this, a strategic framework for dealing with the problems can be proposed. The data is collected from a group meeting, and the result is validated through interviews. The result shows that the lack of legislation in urban renewal is the most significant major problem in current urban renewal decision-making, especially the lack of participation and cooperation mechanism and the guidance on urban renewal planning in current laws and regulations. In terms of stakeholder capacity, a complex network in governmental sectors created by diverse sectors at different governmental levels is another big problem. Moreover, the fragmentation of decision-making stages and the massive waste of time and resources in coordination and negotiation are also severe problems occurred in the decision-making process. The empirical result also identifies the most important strategies which are not only essential but also in urgent need to solve the problems. Based on this, a strategic framework is proposed for comprehensively dealing with the problems. In this strategic framework, the supportive legal environment plays the role of the foundation. Besides, there are three critical components in the framework: the improved organizational structure and cooperation mechanisms, a detailed urban renewal planning approach, and the optimized decision-making process. Based on the supportive legal environment, these three elements can also supplement each other in different aspect.

The findings of this research contribute to a better understanding of the urban renewal decision-making in China and provides a set of recommendations. This demonstrates the scientific as well as the societal relevance of this thesis. Relevance to science: Currently, few of existing research studies conducted an in-depth exploration of the urban renewal decision-making in a holistic view. Further, even less of them considered the situation in the Chinese context. This research fills in the research gap. It not only provides a better insight into the current decision-making system but also to develop a set of strategies to resolve the identified issues. The data in this research mainly originates from China, but the research methodology can be seen as an example for further application in another context. It adds new knowledge on the exploration of the decision-making of public projects.

Relevance to society: Since the strategy is designed from the perspective of the government, it can be directly adopted by the authority. Through this empirical study, the government at different administrative levels can adopt a more holistic view of the decision-making system, knowing what the drawbacks of this system

are and how urgently it needs to be improved. Hopefully, it will help to change their perceptions and guide them to resolve the issues, and to achieve the requirement of sustainability finally.

Samenvatting

Sinds het hervormings- en openstellingsbeleid eind jaren zeventig heeft China een snelle verstedelijking en economische groei doorgemaakt. Om aan de stijgende vraag naar stedelijke woningen te voldoen, heeft stadsvernieuwing een belangrijke rol gespeeld, wat de stedelijke welvaart in China aanzienlijk bevordert. Tegelijkertijd deden zich echter veel problemen voor bij grootschalige stadsvernieuwingsprojecten. Om de onbedoelde gevolgen van stadsvernieuwing te vermijden, kan de manier waarop de beslissingen zijn genomen een belangrijk aandachtspunt zijn (Juan, Roper, 2010, Maginn, 2007, Mayer, van Bueren, 2005, Wang, Shen, 2014). Omdat het echter ontbreekt aan relevante wet- en regelgeving die de besluitvorming over stadsvernieuwing in China expliciet aanstuurt, werden veel beslissingen op een relatief grove manier genomen, die wordt bekritiseerd vanwege het gebrek aan transparantie en rechtvaardigheid (Liao, 2013). In deze context is de stedelijke vernieuwing in China, om de problemen aan te pakken, de nieuwe fase van duurzaamheid ingegaan. Hierbij is de oude manier van alleen focussen op de fysieke herontwikkeling veranderd in een manier om meer sociale factoren te overwegen, zoals participatieve methoden en sociaal beheer (CSUS, 2019). Om het doel van duurzaamheid te bereiken, heeft dit proefschrift tot doel het inzicht in de besluitvorming over stedelijke vernieuwing in China te verdiepen en bij te dragen aan het aanbevelen van strategieën om het systeem te verbeteren. Het beantwoordt de volgende hoofdonderzoeksvraag: Wat zijn de problemen van de huidige besluitvorming over stadsvernieuwing in China en welke strategieën kunnen de problemen aanpakken?

Op basis van de participatieve besluitvormingstheorie en de kenmerken van stadsvernieuwing wordt een conceptueel kader gebouwd voor het onderzoek. In dit kader zijn er drie essentiële elementen in de besluitvorming over stadsvernieuwing onderscheiden: de stakeholders, het besluitvormingsproces en de wet- en regelgeving. De rol van de stakeholders bestaat uit twee dimensies. De eersteis de verwachting van de verschillende belanghebbenden, die ook verwijst naar hun interesses en percepties van het stadsvernieuwingsproject. De tweede is de status van de deelname van belanghebbenden, waaronder hun verschillende rollen, kenmerken en het samenwerkingsnetwerk bij de besluitvorming. De verkenning van het besluitvormingsproces bestaat uit de efficiëntie en het effect van verschillende besluitvormingsfasen en gedetailleerde werken. Door de diepgaande studie van de stakeholders en het proces van besluitvorming over stadsvernieuwing kunnen

ook de functies, de volledigheid en de impact van wet- en regelgeving (het derde element) worden geanalyseerd. In dit proefschrift is Chongqing gekozen als casestad omdat het probleem van de stadsvernieuwing duidelijk aanwezig is en de stad goed toegankelijk is voor het verzamelen van gegevens.

Op basis van het onderzoekskader is in dit onderzoek eerst een empirische studie uitgevoerd naar de verwachtingen van belanghebbenden bij stadsvernieuwingsprojecten. Het identificeert en analyseert de mogelijke verwachtingen van de belangrijkste groepen van belanghebbenden: overheidssectoren, adviserende partijen, het grote publiek, bewoners ter plaatse bij renovatieprojecten en bewoners ter plaatse. Uit diepte-interviews met verschillende belanghebbenden en vragenlijstonderzoeken blijkt dat er geen paar belanghebbenden zijn die vergelijkbare verwachtingen koesteren bij stadsvernieuwingsprojecten. Door onwetendheid en onbegrip ontstaan er vaak conflicten tussen stakeholders tijdens het stadsvernieuwingsproces. Wat betreft de sociale dimensie blijkt het behoud van sociale stabiliteit een topprioriteit van de overheid te zijn. Dit is echter niet het geval bij veel andere belanghebbenden. Het beschermen van het bestaande sociale netwerk in de gemeenschap uiterst belangrijk voor de bewoners. Toch wordt dit vrijwel genegeerd door zowel de overheid als de adviseurs. Hoewel het bouwen van energie-efficiëntie woongebouwen een bron van zorg is voor het publiek en de bewoners ter plaatse, staat het niet altijd op de agenda bij het uitvoeren van stadsvernieuwingsprojecten, omdat het relatief minder belangrijk is voor overheden en adviseurs. Vanuit economisch perspectief is het niet verwonderlijk dat alle groepen van belanghebbenden economische voordelen verwachten, maar deze verwachtingen lopen uiteen. De overheid en het grote publiek maken zich meer zorgen over de lokale economische ontwikkeling, maar de bewoners streven meestal hun particuliere economische belangen na. Deze ongelijkheid kan de kernwaarde van “algemeen belang” in China in twijfel trekken. Bovendien leveren de resultaten ook bewijs voor een enorm verschil in verwachtingen tussen de bewoners in de twee soorten stadsvernieuwingsprojecten (renoveren en herontwikkeling). In dezelfde buurt blijven of naar een nieuwe wijk verhuizen, heeft grote invloed op de perceptie van de bewoners. Om het begrip van diverse behoeften in verschillende projecten te verbeteren, zal het nuttig zijn om meer stemmen van de betrokken groepen te horen.

Om de belanghebbenden volledig te begrijpen, is in de tweede stap van dit onderzoek ook de verkenning van de deelname van belanghebbenden aan de besluitvorming over stadsvernieuwing vereist. Stakeholderanalyse en sociale netwerkanalyse werden ingezet als onderzoeksmethodologie. Gegevens werden verzameld door middel van diepte-interviews en een vragenlijstonderzoek. Met het Yuzhong-district in Chongqing als casusgebied, identificeert dit onderzoek 36 belanghebbenden

die deelnemen aan het besluitvormingsproces voor stadsvernieuwing, die acht verschillende groepen vertegenwoordigen. De resultaten tonen de hoge complexiteit van de kenmerken van belanghebbenden en het interactienetwerk daartussen tijdens de besluitvorming over stadsvernieuwing. Aangezien de meeste stadsvernieuwingsprojecten in China door de overheid worden geleid, spelen overheden een dominante rol in het besluitvormingsproces. De veelheid aan overheidssectoren op verschillende bestuursniveaus die bij het proces betrokken zijn, vormen echter ook aanzienlijke belemmeringen voor samenwerking. De informele deelname van ontwikkelaars kan toekomstige investeringen op het gebied van potentiële vernieuwing garanderen. Het vermindert het financiële risico van de overheid, maar creëert ook een neveneffect op de resultaten (bijvoorbeeld de inmenging van ontwikkelaars bij de planning). Over het algemeen wordt het gebrek aan inspraak bij de besluitvorming gezien als de belangrijkste oorzaak van conflicten tussen het publiek en andere belanghebbenden. Desalniettemin zijn de meeste belanghebbenden, waaronder het publiek zelf, niet van mening dat het bevorderen van inspraak van belang is. Dit komt omdat verschillende belanghebbenden een negatieve perceptie van anderen hebben.

Na de verkenning van stakeholders als eerste en tweede stap van dit onderzoek, wordt in de derde stap het onderzoek naar het besluitvormingsproces van stadsvernieuwing uitgevoerd. De transactiekostentheorie wordt gebruikt om het begrips- of besluitvormingsproces vanuit het perspectief van de nieuwe institutionele economie te analyseren. Het biedt een specifiek perspectief om te kijken naar de efficiëntie en billijkheid van beleidsinstrumenten, onbedoelde gevolgen waar te nemen, meer praktische beleidsinstrumenten te ontwerpen en de basis te bieden om verschillende aspecten van de institutionele omgeving op te nemen (Garrick, McCann, 2013, McCann, 2013, Qian, Chan, 2012, Shahab, Clinch, 2018). Het onderzoek richt zich op de stakeholdergroepen van gemeente, districtsbestuur, lokale bestuursorganen en de adviespartijen. Ze zijn zeer actief betrokken bij het administratieve proces van besluitvorming over stadsvernieuwing. Op basis van de transactiekostentheorie wordt een analytisch raamwerk opgesteld om transactiekosten te identificeren en te analyseren die door verschillende groepen belanghebbenden worden gedragen in alle vier de besluitvormingsfasen. Door gegevens te verzamelen via diepte-interviews, laten de resultaten zien dat er veel transactiekosten bestaan in het administratieve proces van besluitvorming over stadsvernieuwing. De verdeling is ongelijk in termen van verschillende fasen en groepen van belanghebbenden. Bovendien vertegenwoordigen de enorme hoeveelheid onderhandelings- en coördinatiewerkzaamheden een aanzienlijk deel van de totale transactiekosten. De belangrijkste oorzaak van transactiekosten op hoog niveau zijn de huidige instellingen voor besluitvorming over stadsvernieuwing, waaronder drie aspecten. Ten eerste zijn de verschillende besluitvormingsfasen

strikt gescheiden. Het leidt tot een gebrek aan feedbacklus en creëert mazen in het besluitvormingsproces. De tweede is het gebrek aan begeleiding bij projectplanning. Momenteel zijn het doel en de elementen van een projectplan duidelijk voor alle groepen belanghebbenden, maar hoe het projectplan moet worden opgesteld, is niet expliciet, wat de planning in veel omstandigheden beperkt. Het derde aspect is het ontbreken van een sectoroverschrijdend samenwerkingsmechanisme. Elke stakeholder moet voldoen aan veel overheidsplanning en specifieke eisen van andere stakeholders. Wanneer een probleem veel sectoren betreft, kan de samenwerking ingewikkelder worden en misverstanden en conflicten veroorzaken.

De laatste stap van het onderzoek is het voorstellen van een strategisch kader om de problemen van besluitvorming rond stadsvernieuwing aan te pakken. Volgens het conceptuele kader van dit onderzoek en op basis van de resultaten van de eerste, tweede en derde stap, worden vier grote problemen bij de huidige besluitvorming over stadsvernieuwing geconcludeerd: stakeholdercapaciteit, stakeholderpercepties, proces en wetgeving. Onder de grote problemen zijn er in totaal 14 subproblemen. Bovendien worden negen aanbevolen strategieën voor de aanpak van de gecompliceerde problemen afgerond. Analytic Network Process (ANP) wordt in dit onderzoek gebruikt om kritische problemen en strategische alternatieven te bepalen. Op basis hiervan kan een strategisch kader worden voorgesteld om de problemen aan te pakken. De gegevens worden verzameld door middel van een groepsbijeenkomst en het resultaat wordt gevalideerd door middel van interviews. Het resultaat laat zien dat wetgeving het belangrijkste grote probleem is bij de huidige besluitvorming over stadsvernieuwing, met name het gebrek aan participatie- en samenwerkingsmechanisme en de begeleiding bij de planning van stadsvernieuwing in de huidige wet- en regelgeving. Wat betreft de capaciteit van belanghebbenden is een complex netwerk in overheidssectoren dat is gecreëerd door diverse sectoren op verschillende overheidsniveaus een ander groot probleem. Bovendien zijn de versnippering van de besluitvormingsfasen en de enorme verspilling van tijd en middelen aan coördinatie en onderhandeling ook ernstige problemen in het besluitvormingsproces. Het empirische resultaat identificeert ook de belangrijkste strategieën die niet alleen essentieel maar ook dringend nodig zijn. Op basis hiervan wordt een strategisch kader voorgesteld om de problemen volledig aan te pakken. In dit strategisch kader speelt de ondersteunende juridische omgeving de rol van de stichting. De verbeterde organisatiestructuur en samenwerkingsmechanismen, de gedetailleerde aanpak van stedelijke vernieuwingsplanning en het geoptimaliseerde besluitvormingsproces zijn nog drie essentiële componenten in het raamwerk, die elkaar in verschillende opzichten kunnen aanvullen.

De bevindingen van dit onderzoek dragen bij aan een beter begrip van de besluitvorming rond stadsvernieuwing in China en leiden tot een reeks aanbevelingen. Dit toont zowel de wetenschappelijke als de maatschappelijke relevantie van dit proefschrift aan. Relevantie voor de wetenschap: Momenteel hebben enkele van de bestaande onderzoeken geen diepgaande verkenning van de besluitvorming over stadsvernieuwing uitgevoerd in een holistische visie. Bovendien beschouwden nog minder van hen de situatie in de Chinese context. Dit onderzoek vult de onderzoekskloof op. Het geeft niet alleen een beter inzicht in het huidige besluitvormingssysteem, maar ook om een reeks strategieën te ontwikkelen om de geïdentificeerde problemen op te lossen. De data in dit onderzoek komen voornamelijk uit China, maar de onderzoeksmethodiek kan worden gezien als voorbeeld voor verdere toepassing in een andere context. Het voegt nieuwe kennis toe over het verkennen van de besluitvorming van openbare projecten.

Maatschappelijke relevantie: Aangezien de strategie is ontworpen vanuit het perspectief van de overheid, kan deze direct door de overheid worden overgenomen. Door deze empirische studie kan de overheid op verschillende bestuursniveaus een meer holistische kijk krijgen op het besluitvormingssysteem, wetende wat de nadelen van dit systeem zijn en hoe dringend het moet worden verbeterd. Hopelijk helpt het om hun perceptie te veranderen en hen te begeleiden bij het oplossen van de problemen en om uiteindelijk aan de eis van duurzaamheid te voldoen.

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1 Introduction

1.1 Introduction

1.1.1 Urbanization and Housing Development in China

By the year 2010, worldwide, there was a notable watershed in urbanization history, with about half of the 7 billion population living in cities (Jim, 2013). The increasing size of urban populations gave rise to the need for high-quality buildings and neighborhoods in a variety of urban areas. This trend was even more apparent in China under the decades of fast-paced development (Liu et al. , 2012). Since the late 1970s, China had passed through 30 years of large-scale rapid urbanization progress. From 1978 to 2015, the urban population in China climbed from 172 million to 813 million, and the urbanization rate rose from 17.92% to 58.52% (NBS, 2019). Based on the urbanization curve introduced by Northam (1979), in the next decade, plenty more of the rural population in China will move to urban areas at a high rate. It is predicted that the urbanization rate will exceed 60% at the end of 2020, and reach 80% before 2030 (Li et al. , 2014, Yue et al. , 2013). The unprecedented urbanization in China brings with it the modernized urban lifestyle, and stronger demands for quality housing.

After the foundation of the People's Republic of China in 1949, the development of urban residential buildings experienced several distinct phases (Xiong, 2010). Before the 1980s, the whole housing system belonged to the social welfare system. During that period, real estate was mostly developed by the government or state-owned enterprises, which was a significant burden for state finance. To meet the growing housing demands with resource constraints, a large number of residential buildings were constructed. These were with a simple design and low building standards. Their construction quality was relatively poor, their residential function was incomplete (e.g., no independent toilet or kitchen), and they lacked sufficient community facilities and amenities.

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In the 1980s, the housing system was reformed, to bring about more market power in real estate development. However, due to the limitation of citizens' purchasing capacity and for political concerns, most of the newly-built buildings were only half-commercialized, which means that part of the investment was provided by the government or state-owned enterprises. By the end of the decade, there were 1.28 billion m^2 of residential buildings completed in China, and most of them were the brick-concrete structure, with relatively small living area and public space.

It wasn't until the late 1990s, that the real estate market gradually became mature. The capacity of planning, design, and construction of urban neighborhoods also grew to a more professional level. Therefore, today in China, there are large numbers of urban neighborhoods and residential buildings, especially those built before the late 1990s, that do not meet the current living expectations and demands.

1.1.2 The Important Role of Urban Renewal

After the fast-paced urban development in previous decades in China, in many cities, the rate of new property/housing development had to be slowed down, due to the insufficient undeveloped urban land. At current rates, in Shenzhen, there would be only 5900 hectares of urban land available for development after 2020; In Shanghai, only 5% of urban land could be used for new development in the future (Yi, 2018). To sustain rapid urban growth and meet the rigid housing demand, the central government promoted the efficient utilization of existing public resources. Plenty of dilapidated neighborhoods and residential buildings need to be renewed, both for the concerns of their physical condition as well as for the benefit of the macro-urban development. Therefore, urban renewal has already become an essential option for meeting such a demand.

Urban renewal is a process that rehabilitates the urban areas through physical change and other comprehensive plans to cope with urban decay and achieve various socioeconomic goals (Adams and Hastings, 2001, Couch, 1990, Lee and Chan, 2008). Another widely-used term "urban regeneration" shares similar meanings with urban renewal but with a wider scope (Wassenberg, 2010, Zheng et al. , 2014). It emphasizes an integrated vision and action to improve economic, social, and environmental conditions (Roberts and Sykes, 1999). In this thesis, the author applies the concept of urban renewal and the "physical change" part of urban regeneration interchangeably. Any project without "physical change" is not included in the research scope of this thesis. Along with the promotion of urbanization, as a way to cope with urban problems, urban renewal plays an increasingly critical role in

our urban life (Ho et al. , 2011, Shen et al. , 2013). It plays a vital role in improving life quality and will continue to bring positive changes in urban areas in the near future (Chen et al. , 2008, Shen, Yuan, 2013).

In practice, there is no doubt that urban renewal has already become one of the core development strategies in numerous cities in China. In recent years, many urban renewal projects have been planned and implemented across China. For example, the total area of plots of land under construction within urban areas, around 40% comes from building demolition through urban renewal projects in each year. From 2008 to 2012, more than 12.6 million residential units were demolished through urban renewal projects (SC, 2013). According to the more recent public reports, from 2013 to 2017, this number climbed to 25.5 million units.

1.1.3 The New Era of Participatory Urban Renewal Decision-Making

Urban renewal has made a significant contribution to promoting China's urban prosperity, enhancing the habitability and economic competitiveness of cities. However, every coin has two sides. There are also many problems occurring. Most of the urban renewal projects were implemented in the areas with neighborhoods or buildings built before the late 1990s, but their designed service life is at least 50 years. It means that many residential buildings should have a longer life than what was intended (Liu et al. , 2015). Indeed, many of the demolished buildings cannot meet the living standard nowadays. Still, there are also some criticisms, arguing that the decisions were mostly made based on the consideration of economic growth (Liu, Xu, 2012). On a broader view of existing buildings or neighborhoods, demolition is a massive waste of resources, since many of them are not dilapidated (Hu et al. , 2008). Moreover, large-scale urban renewal projects also require relocation for a great deal of in-situ residents. It may break the existing social networks, destroy the community culture, or even affect their education and employment (Hemphill et al. , 2004a, Yau and Chan, 2008). In some cases, it also caused unintended social conflicts between the in-situ residents and the governments (Liu, Xu, 2012, Yi et al. , 2017).

To better avoid the unintended consequences that occurred in urban renewal, studies on how the decisions were made can be one key focus (Juan et al. , 2010, Maginn, 2007, Mayer et al. , 2005, Wang et al. , 2014). However, in current laws and regulations, there is no clear guidance on how to decide on urban renewal in most Chinese cities. Taking Chongqing as an example, the document "*Suggestions on Promoting Renewal Projects of Old and Dilapidated Buildings Renewal Project in Main*

Districts Area" was issued by the municipal government in 2008. It regulates that once a building is labeled as a dilapidated building, this area should be designated as an urban renewal area (CMG, 2008). It is the only strict and detailed regulation. But obviously, the decisions are made based on much more than the above straightforward principle. The other important information is not regulated, including which organization/individual should participate in decision-making, how each stakeholder can contribute, and what comprehensive factors should be considered in decision-making, etc. Therefore, many decisions have been made in a relatively rough way, which is criticized for lacking transparency and equity (Liao, 2013). The occurred problems also indicate that not all stakeholders are satisfied with the outcomes (Wang, 2013).

To face these issues, as it is indicated by CSUS (2019), urban renewal in China has stepped into the new stage of sustainability. It has changed from the old mode of only focusing on the physical redevelopment, to the new mode of considering more social factors such as participatory methods, social management, etc. Besides, according to the policies issued by the national government in recent years, exploring participatory decision-making mechanisms in urban renewal, by considering Chinese characteristics, is an effective step to meet the demands of sustainability in the new era (CCCPC and SC, 2016, MLR, 2016). However, to achieve the goal in practice, it requires a comprehensive evaluation of current urban renewal decision-making and proposes sets of targeted strategies (Yi, 2018, Zhou et al. , 2017, Zhuang et al. , 2019).

This thesis aims to understand urban renewal decision-making in China, and propose recommendations for improvement, in the discourse of participatory decision-making in Chinese contexts. The remaining sections of this chapter are organized as follows. Section 1.2 provides a theoretical introduction of participatory urban renewal decision-making and the goal of sustainability. Section 1.3 briefly introduces the background of the urban renewal decision-making process. In section 1.4, the stakeholder participation of urban renewal decision-making is introduced. Then, in section 1.5, the research approach is presented, including problem statement, research questions, research scope, methods, and data collection. Finally, section 1.6 outlines the structure of the thesis and briefly introduces the main content of each chapter.

1.2 Participatory Urban Renewal Decision-Making: The Way towards Sustainability

1.2.1 The Goal of Sustainability in Urban Renewal

In the new era of urban renewal, how to achieve the goal of sustainability through a rational decision-making approach is a major concern of the government in China. The concept of Sustainability was first introduced in the early 1970s (Stivers, 1976). Over the last two decades, this concept has emerged and been applied to urban renewal (Bromley et al. , 2005, Conroy and Berke, 2004). Sustainable urban renewal combines the stimulation of economic activities and environmental improvements with social vitality (Colantonio and Lane, 2007). In the social dimension, one of its primary aims is to achieve efficient and effective outcomes by considering two elements: ethical values and norms (e.g., equity and justice) related to the broad engagement of stakeholders (Vallance et al. , 2011). A rational stakeholder participation mechanism is emphasized as a crucial approach to benefit sustainable urban development in many research studies (Couch and Dennemann, 2000, Garcia, 2004, Kaza, 2006).

Although many academic and practical studies have been done on this issue, such efforts cannot always achieve the positive goals of social sustainability. The reason is that it is not easy to reduce social inequality and cleavages by efficiently and effectively addressing the needs of all. There is a wide range of stakeholders in different contexts (Dempsey et al. , 2011, Hemphill, Berry, 2004a, Pendlebury et al. , 2004). In Western countries, such as the UK and the Netherlands, collaborative governance is built among governmental sectors, consultants, affected residents, and developers, etc., the different discourse power, sense of inequality and the inefficient process are still the top causes of conflicts between stakeholders (Dodson, 2006, Hemphill et al. , 2004b). Compared with their Western counterparts, in China, the stronger government power and fewer participation platforms make such conflicts even more apparent and outstanding (for the reason such as, different power, sense of inequality, inefficient process, etc) (Li et al. , 2018). The author believes that the priority is to explore the participatory urban renewal decision-making mechanism in the specific context of China.

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1.2.2 Participatory Decision-Making

Participatory decision making is a practice of sharing power among different stakeholders and empowering them to effectively and efficiently partake in the decision-making process (Carmeli et al. , 2009). It is associated with substantial interaction among participants (Whitney, 1994). Today, although there are increasing numbers of studies about stakeholder participation, there is still no broad consensus about the standard stakeholder participation approach in the decision-making of public issues (Harris et al. , 2016, Korfmacher, 2001, Purvis et al. , 2015). In the field of public politics, Renn et al. (1993) presented a conceptual model for participatory decision making. The model includes three consecutive phases to integrate multi-stakeholder, multi-value, and multi-interest dimensions into practical decision making. Ananda (2007) implements participatory decision-making in forest land-use policy by using the Analytic Hierarchy Process (AHP) to incorporate stakeholder preferences. Prager and Nagel (2008) explore participatory decision-making on agri-environmental programs by applying an interactive model and the facilitation of the corresponding communication process.

To conclude from the literature, there are three significant elements in participatory decision-making in public projects. The first is the process, which determines how a decision can be made through defined approaches and procedures. The second is the stakeholders, whose capacities and perceptions are strongly related to their roles and functions in decision-making. Third, on top of the above two elements is a set of strict and detailed laws and regulations, which define legal criteria, standards, and guidance for stakeholder participation in the decision-making process.

1.2.3 Key Elements of Urban Renewal Decision-Making

To better achieve the goal of sustainability, it requires an in-depth exploration of current urban renewal decision-making in the Chinese context. Based on the participatory decision-making theory and the characteristics of urban renewal, there are two vital elements to be focused on, which are shown in Figure 1.1. On the one hand, different stakeholders need to be clearly identified, and their characteristics, interests, perceptions, and cooperation/interaction relationship need to be probed. On the other hand, a question arises about whether the current process is efficient and effective for collecting plenty of information and can lead to a rational decision. Through exploring these two elements of urban renewal decision-making, the functions, comprehensiveness, and the effect of laws and regulations, which are critical in participatory decision-making of public projects, can also be observed.

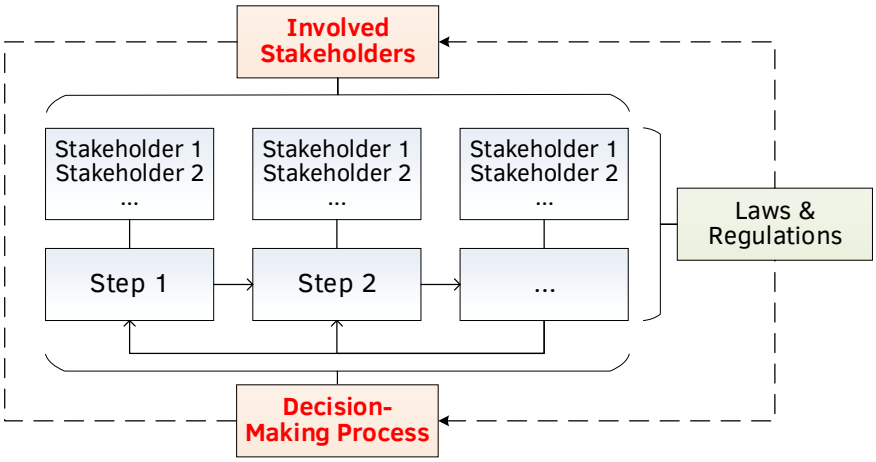

FIG. 1.1 Vital Elements of Urban Renewal Decision-Making

1.3 The Decision-Making Process of Urban Renewal

Based on the theory of both general and participatory decision-making, one foundation of decision-making is the “process” (Abelson and Levi, 1985, Renn, Webler, 1993, Snyder et al. , 2002). Although there is no widely accepted decision-making process, there are three basic actions that should/can never be skipped: identifying the problems, analyzing possible solutions, and selecting one option. However, the urban system is a complex social-economic system, performing a wide range of functions (Forrester, 1969). In this context, the decision-making of urban renewal requires a comprehensive process, which not only decides whether to do a project or not, but also considers the types of projects, site selection, renewal mode, timing, and macro urban development, and social risk, etc. (Jiang et al. , 2012, Tang, 2015, Yi, Liu, 2017).

In this thesis, the decision-making of urban renewal is defined as the process starting from project application, and before housing expropriation and demolition. In China, there is no official document systematically guiding the decision-making process, and so the detailed process differs from one city to another. But based on

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literature and the author's knowledge, it can be categorized into four major stages in general, namely the preparation stage, project planning stage, compensation planning stage, and final agreement stage (Liao, 2013, Tian, 2009, Yang, 2007). In the preparation stage, preliminary information searching is conducted to list neighborhoods which are probably brought under an urban renewal plan. Then, in the second stage, a comprehensive project plan will be made, including the selection of renewal area, time arrangement, renewal mode, financing arrangement, etc. In the third stage, a compensation plan of housing expropriation in the designated urban renewal area will be made. In the final stage, the compensation plan will be announced to collect public opinions and reach final agreements between government sectors and the in-situ residents. If the agreement cannot be reached, further negotiation or plan modification will be conducted. In different stages, there are several stakeholder groups involved in and interacting with each other, thus affecting the whole decision-making process. The interaction reflects in the transfer of information or knowledge between stakeholders, which would incur much transaction costs (Hastings and Adams, 2005).

As one key foundation of urban renewal decision-making, the decision-making process attracts attention in many research studies, and many contributions have been made in this field. Maginn (2007) explores the broad strategic potential of applied ethnography and collaborative planning theory in realizing a more effective decision-making process in urban renewal projects. Hunt et al. (2008) develop a sustainability indicator to provide a guideline in the decision-making process of urban renewal. Juan, Roper (2010) presents a model for making the optimal decision for urban renewal in Taipei City. Wang, Shen (2014) develop a framework of decision-making factors and supporting information to facilitate sustainable land use planning in urban renewal projects. Zhou and Zhou (2015) explore the key factors affecting urban renewal, then develop a decision-making evaluation system to guide urban renewal decision-making accordingly. These research studies provide comprehensive and objective guidance for the decision-making process. However, in practice, the process is not served for a "single decision" which only determines whether to implement an urban renewal project or not. Most of the research studies focused on technical exploration. Few of them provide insights into the complex stages of the urban renewal decision-making process from the institutional perspective, not to mention the Chinese context. To avoid unintended consequences and comprehensively improve the efficiency and effect of the decision, this research gap needs to be specifically addressed.

From an institutional perspective, the efficiency and effect of decision-making can be reflected in the level of transaction costs occurred in the decision-making process. Transaction costs are one of the significant elements in the analysis of

all public policies and projects (McCann, 2013, Shahab et al. , 2018). It provides a perspective to look into the efficiency and equity of policy instruments, perceive unintended consequences, design more practical policy instruments, and provide the basis to include various aspects of the institutional environment (Garrick et al. , 2013, McCann, 2013, Qian et al. , 2012, Shahab, Clinch, 2018). Transaction costs theory can bring about a new thought to explore the theory and practice in this context. Therefore, it can be adopted to conduct an in-depth exploration of the urban renewal decision-making process, thus to understand the existing institutional problems better.

1.4 Stakeholder Participation in Urban Renewal Decision-Making

The stakeholder is another key foundation of urban renewal decision-making. A rational stakeholder participation mechanism is a crucial approach to benefit the sustainability of urban development (Couch and Dennemann, 2000, Garcia, 2004, Kaza, 2006). Stakeholders refer to “any group or individual who can affect, or is affected by, the achievement of the organization’s objectives.” (Freeman, 2010, Li et al. , 2012a, Petts and Leach, 2000). Based on this definition, precisely, stakeholders in urban renewal decision-making are those who participate in the decision-making process or influence the decision-making, whose interests are positively or negatively affected by the decision results. In urban renewal projects, the decision-making is greatly influenced by the relationship between different stakeholders, the characteristics of partnership, as well as their interests, perceptions, etc. (Yi, 2018, Zheng, Shen, 2014). In practice, stakeholder systems are recognized as a combination of stakeholders, who are not subjected to constant interaction (Caniato et al. , 2014). Nevertheless, the stakeholders are mostly interdependent (Brugha and Varvasovszky, 2000, Elias et al. , 2002). Only the joint efforts of various stakeholders and the exchange of information, resources, and targets can result in the realization of sustainable urban development (Enserink and Koppenjan, 2007). Such an approach is considered necessary to reach a consensus, and so it is applied in the many Western countries (Begg, 2018, Bobbio, 2019, O'Faircheallaigh, 2010). Therefore, it calls for a good participative institution based on the in-depth understanding of diverse stakeholders in the complex socio-economic system in China (Tang et al. , 2008, Zhuang et al. , 2017).

In China, government intervention exists in economic development and public policy delivery. It cooperates with market power to achieve capital accumulation through land reuse, such as urban renewal under the joint effects of socialist histories and current global trends (Li, Kleinhans, 2018). Although it has brought about many desirable achievements, many problems such as gentrification, social inequality, and loss of culture, etc., are apparent (Suo et al. , 2015). Chinese governments have developed a number of participatory and deliberative institutions, such as public hearings and consultative meetings, to promote stakeholder participation in public projects and maintain social stability (Enserink and Koppenjan, 2007). In 2013, a national reform policy "*The Decision on Major Issues Concerning Comprehensively Deepening Reforms*" was released (CD, 2013). It required the government to shift its role by building itself into a service-oriented government and delegate its power to other participants in public issues. However, until now, there is still no detailed official guidance on stakeholder participation in urban renewal decision-making. To optimize stakeholder participation, it is still a challenge due to the unique institutions and social culture in China (Li et al. , 2012b, Yi, Liu, 2017).

Currently, several research studies have explored stakeholder participation in urban renewal decision-making in China, which revealed some basic characteristics of stakeholder groups. For instance, the government retains the strong power on urban governance through the dominant control of policy release, resource allocation, and service delivery, etc. (He and Wu, 2005). Although the government is considered as one stakeholder in many research studies, it is clear that there are many sectors in several government levels, playing different roles (Collins and Shester, 2013, Liao, 2013, Ruming, 2010). They are the main decision-makers, which can also be seen as internal stakeholders. Other stakeholders are external stakeholders, who can exert indirect influence on and/or affected by the decision (Aragonés-Beltrán et al. , 2017). The public has often been excluded from the decision-making process (Hui et al. , 2008). The developers may exert negative influences on decision-making (Li, Kleinhans, 2018). Third parties, such as consulting parties, NGOs, financial institutions, etc., also provide valuable support in decision-making, but they are barely discussed in the relevant studies (Liao, 2013). Globally, in the field of project stakeholder participation, there are plenty of research studies providing the insight of the stakeholders and analyze their participation in the particular project (Aaltonen, 2011, Bell et al. , 2012, Luyet et al. , 2012, Purvis, Zagenczyk, 2015). However, in terms of urban renewal decision-making in China, few of the existing studies can comprehensively provide insight into stakeholder participation. Due to the complexity of urban renewal decision-making in China, revealing some basic characteristics of several stakeholder groups cannot help to understand the whole picture of stakeholder participation. The in-depth study needs to be conducted to identify who are the stakeholders and key stakeholders, and probe the expectations (interests), characteristics of different stakeholders, as well as their interrelationships.

1.5 Research Approach

1.5.1 Problem Statement

Since the reform and opening-up policy in the late 1970s, China has experienced high-speed urbanization and economic growth. To meet the growing demand for urban housing, urban renewal has played a significant role, which significantly promotes urban prosperity in China. However, at the same time, many problems occurred through large-scale urban renewal projects. For instance, many buildings were demolished in the early stage of their designed service life, which is a massive waste of resources (Liu, Xu, 2012). The relocation of a great deal of in-situ residents may break the existing social networks, destroy the community culture, affect their education and employment, or even causes unintended social conflicts (Hemphill, Berry, 2004a, Liu, Xu, 2012, Yau and Chan, 2008, Yi, Liu, 2017).

To better avoid the unintended consequences that occurred in urban renewal, how the decisions were made can be one key focus (Juan, Roper, 2010, Maginn, 2007, Mayer, van Bueren, 2005, Wang, Shen, 2014). However, in current laws and regulations, there is no clear guidance on how to decide on urban renewal in most Chinese cities. Therefore, many decisions were made in a relatively rough way, which is criticized for lacking transparency and equity (Liao, 2013). In this context, to deal with the problems, urban renewal in China has stepped into the new stage of sustainability, changing from the old mode of only focusing on the physical redevelopment, to the new mode of considering more social factors such as participatory methods, social management, etc. (CSUS, 2019). Based on recent national policies, exploring participatory decision-making mechanisms in urban renewal by considering Chinese characteristics is an effective step to meet the demands of sustainability in the new era (CCCPC and SC, 2016, MLR, 2016).

To better achieve the goal of sustainability, it requires an in-depth understanding of current urban renewal decision-making in China. And according to the participatory decision-making theory and the characteristics of urban renewal, there are two vital elements to be focused. One is the decision-making process, and the other one is the stakeholder participation. In view of the decision-making process, presently, there is no official document systematically guiding the decision-making process in China. Moreover, although there exist some research studies making contributions in this field, most of them are technical exploration (Hunt, Lombardi, 2008, Maginn, 2007,

Zhou and Zhou, 2015). It lacks the research of complex decision-making stages in the institutional perspective, not to mention in the Chinese context. In the aspect of stakeholder participation, there is also no detailed official guidance on stakeholder participation in urban renewal decision-making. The existing research studies only revealed some basic characteristics of stakeholder groups in China (He and Wu, 2005, Hui, Wong, 2008, Li, Kleinhans, 2018). However, few of them comprehensively provide insight into stakeholder participation.

Given the limitations mentioned above, a comprehensive evaluation of the current complex urban renewal decision-making in China is needed to address the issue and fill the gap. The in-depth study needs to be conducted in the above two elements: stakeholder participation and decision-making process. Accordingly, the functions, comprehensiveness, and the effect of laws and regulations, which is another critical element of urban renewal decision-making, can also be considered. Based on the above, strategies can be recommended for the optimization and improvement of the current system.

1.5.2 Research Aim and Questions

Based on the problem statement, this thesis aims to deepen the understanding of urban renewal decision-making in China and contribute to recommend strategies to improve the system. It answers the following main research question:

What are the problems of current urban renewal decision-making in China, and what strategies can address the problem?

To answer the abovementioned research question, it requires the systematical exploration of the current urban renewal decision-making in two aspects, which is highlighted in the above sections. The first aspect is to explore the stakeholders. It consists of two dimensions. One is the different stakeholders' expectations, which also refers to their interests and awareness of the project. Another one is the status of stakeholders' participation, which includes their different roles, characteristics, and cooperation network.

The second aspect is to explore the decision-making process, which includes the efficiency and effect of different decision-making stages and detailed works. From an institutional perspective, such efficiency and effect can be reflected in the transaction costs that occurred in the decision-making process. As it is stated by Freeman et al. (2010), transaction costs analysis tends to downplay the importance

of analysis of particular stakeholder relationships. Therefore, in this perspective, combining the analysis of transaction costs and the stakeholders (first aspect) can benefit from obtaining the whole picture of urban renewal decision-making.

Finally, by examining the above aspects, the status quo and problems of urban renewal decision-making can be systematically understood, and thus a set of strategies can be proposed to deal with the issues. Therefore, this research has been broken down into four key questions, which will be addressed in Chapters 2, 3, 4, and 5, respectively.

Chapter 2 answers the key question:

1 What are the expectations (interests) of different key stakeholders in urban renewal projects in China?

This key question can be separated into several sub-questions, as follows:

- a Who are the key stakeholders in urban renewal projects?
- b What do the different key stakeholders expect to achieve through urban renewal projects?
- c What are the differences in stakeholders' expectations among key stakeholders?

Chapter 3 answers the key question:

2 What are the stakeholders' roles, characteristics, and their participation structure in urban renewal decision-making in China?

The following specific sub-questions need to be answered accordingly:

- a Who are the stakeholders in urban renewal decision-making?
- b What are the characteristics of each stakeholder?
- c What are the cooperative relationships between the identified stakeholders?

Chapter 4 answers the key question:

3 What are the transaction costs of the current urban renewal decision-making process in China?

Also, there are three specific sub-questions to be answered:

a What is the detailed urban renewal decision-making process?
b What are the transaction costs borne by different key stakeholder groups in each decision-making stage?
c What are the levels of different transaction costs given to each key stakeholder group?

Based on the results of Chapters 2, 3, and 4, Chapter 5 pays attention to answering the fourth key question:

4 What is the set of strategies for solving the problems of current urban renewal decision-making in China?

It consists of following specific sub-questions:

a What is the list of problems of current urban renewal decision-making in China?
b What are the possible strategies to solve the problems?
c What are the priority strategies comparing to others?

1.5.3 Research Scope

Generally, urban renewal is a broad concept, which includes a wide range of land-use types and renewal methods. Therefore, a strict definition of the research scope is needed, which is shown in Figure 1.2. Classified by building types in the designated renewal areas, urban renewal projects can be divided into four categories: renewal in the residential, commercial, industrial, and mixed-use areas (Shi et al. , 2015). In the residential area, there are mostly residential buildings with a few local stores and infrastructural facilities. In China, most of the urban renewal projects were located in residential areas (Liu, Xu, 2012). Besides, most of the social conflicts between stakeholders are raised in residential areas (Liao, 2013, Zhu, 2015). Therefore, considering the representativeness and universality, this thesis selects the residential area as the targeted area of urban renewal projects.

In terms of the renewal approach, there are three commonly used patterns for buildings in urban renewal, which are adaptive reuse, redevelopment, and rehabilitation (Ma and Zhang, 2006). In urban renewal, adaptive reuse means reusing an old building for a particular purpose other than its original use. Generally, adaptive reuse is mostly adopted in airfields, government houses, industrial

buildings, office buildings, schools, and religious buildings, etc. (Langston et al. , 2008). Since this thesis focuses on urban renewal in the residential area, the approach of adaptive reuse is not considered. Redevelopment refers to demolishing old buildings and reconstructing new ones. Rehabilitation retains the buildings and neighborhoods through small-scaled physical changes, such as building structural reinforcement, façade renovation, neighborhood environment improvement, etc. In China, redevelopment is the dominant choice and makes up the majority of urban renewal projects (Suo, Wu, 2015). Besides, many of the urban renewal problems, such as social contradictions caused by relocation and compensation, are raised in redevelopment projects (Yau and Chan, 2008). By considering the representativeness and better targeting the essential problems, this thesis focuses on redevelopment projects of urban renewal. Rehabilitation is only discussed in Chapter 2. And part of the purpose is to understand the differences in in-situ residents' expectations between redevelopment and rehabilitation projects.

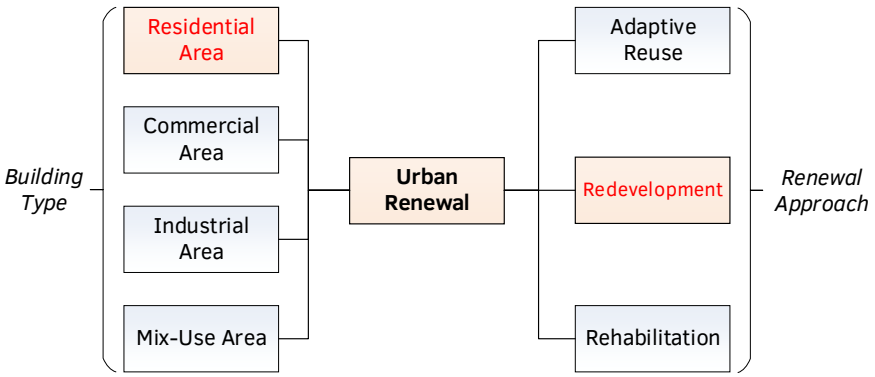

FIG. 1.2 Research Scope

1.5.4 Research Approach: Data and Methods

The content of the underlying research covers a range of subjects. Therefore, this thesis calls for a comprehensive analysis. It is grounded in mixed research methods and various sources of qualitative and quantitative data. As the representative city in southwest China and an active city in urban renewal projects, Chongqing was selected as the case city for data collection in this thesis (Figure 1.3). Chongqing is one of five municipalities directly under the central government. It is the core and largest city in southwest China. The urban development features of Chongqing are considered as a typical sample in China (Zhou, Zhou, 2017). In the last decades, it has experienced rapid urbanization and

economic growth. From 1997 to 2016, the urbanization rate in Chongqing increased from 31.0% to 62.6%, and its annual growth rate of gross domestic product (GDP) is 13.78% (CSB, 2017b). To meet the rigid demand for urban housing and maintain economic growth, in 2008, Chongqing Municipal Government issued a new policy to make urban renewal as one of the key urban development strategies (Liu, Xu, 2012). From 2010 to 2017, there were 1423.54 hectares of urban renewal projects being implemented (CSB, 2017a). Featured by the massive urban renewal projects, Chongqing provides many resources and project cases for conducting relevant research.

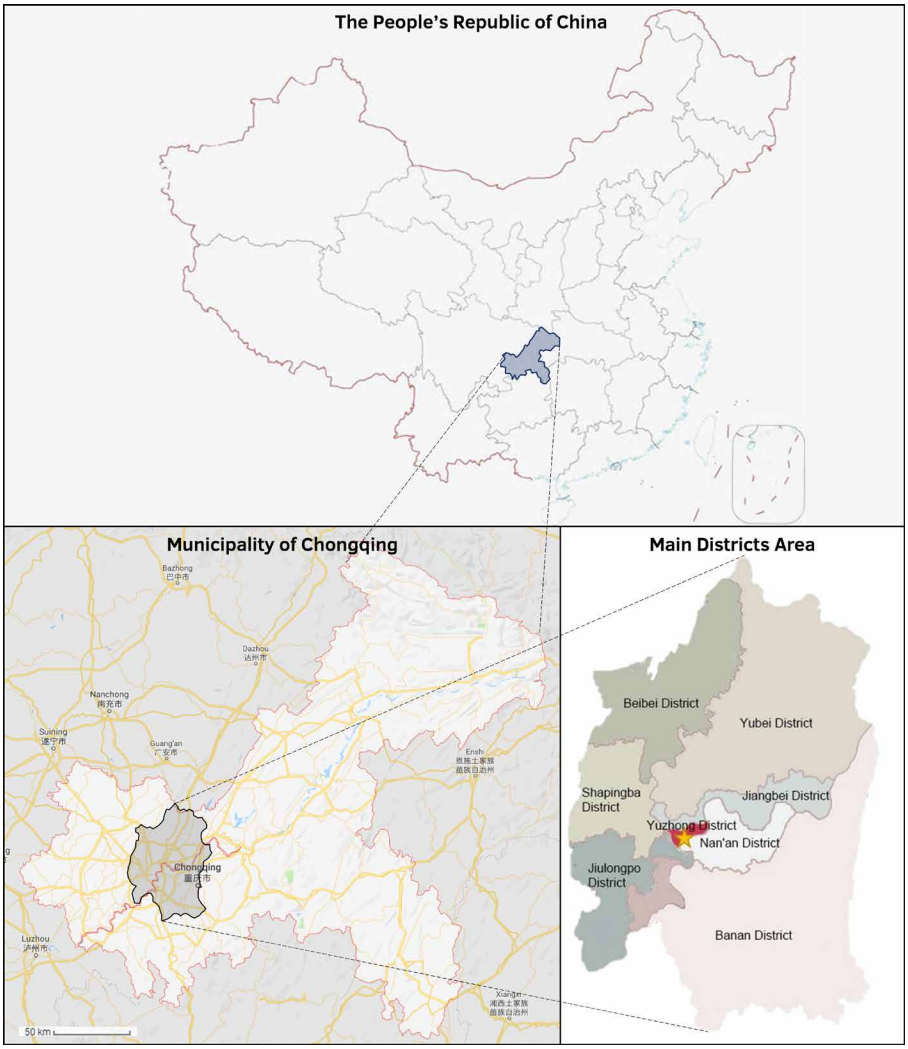

FIG. 1.3 Location of Chongqing

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In Chongqing, the municipality can be divided into 38 sub-divisions, including 26 districts and 12 counties. The central city area, also named the main district area, is the core of city and indispensable in the history of urban development. It consists of 9 districts named Yuzhong, Dadukou, Jiangbei, Shapingba, Jiulongpo, Nan'an, Beibei, Yubei, and Banan. Among the nine districts, Yuzhong District is the capital of Chongqing. It has played a significant role in the history of Chongqing's urban development. As it is shown in Table 1.1, from 2012 to 2016, there is an increasing number of urban renewal projects being implemented in the main district area. In 2012, the area of projects was around 200,000 m^2, affecting less than 3000 households. But in 2016, the renewal area was eight times larger than that in 2012, affecting more than 20,000 households. This area can represent one hotspot of urban renewal in Chongqing. Thus, this area is selected for data collection. Since the institution and organizational structure of the above nine districts in the main district area are similar, in Chapter 4, the exploration of the urban renewal decision-making process focuses on the case of the whole area. In Chapter 2, the data about in-situ residents need to be collected in individual urban renewal projects. And in Chapter 3, the case of the stakeholder participation network requires the investigation in one district government. Therefore, Chapters 2 and 3 focus on the case in Yuzhong District.

TABLE 1.1 Statistics of Urban Renewal Projects in Main Districts Area in Chongqing

Year	Number of Project	Number of Affected Residential Unit	Area (m^2)
2012	14	2627	213798
2013	31	5403	688292
2014	42	6519	812100
2015	108	18862	1715219
2016	84	22015	1910185

Source: Administration of Land, Resources, and Housing of Chongqing Municipal Government

Figure 1.4 shows the overview of the research approach. In Chapter 2, the data was collected through literature review, interview, and questionnaire survey for exploring the expectations (interests) of different key stakeholders in urban renewal. Through the literature review, the list of possible expectations of different stakeholder groups was identified. Then, semi-structured interviews were conducted with 23 interviewees representing different stakeholder groups. All the selected representatives are authorities, professionals, or citizens who have either gained rich practical experience or sufficient knowledge in urban renewal. The interviews helped to verify the list, adjust targeted groups, and provide insightful information hidden behind stakeholders' expectations. Based on the interviews, a questionnaire survey was conducted. Potential respondents except the general public were purposely selected, ensuring most of them

possess adequate knowledge or experience in urban renewal. For the general public, questionnaires were collected from randomly chosen respondents through an internet survey, which increases the sample representation. The respondents were asked to measure the significance level of each factor (expectation). The questionnaires were delivered to the people representing each different stakeholder group. In this way, 257 valid questionnaires covering the relatively balanced number of different groups were collected. Finally, parametric tests were adopted for data analysis. The questionnaire result was calculated to compare the importance level of expectations in each stakeholder group, within different pairs of groups, and among all groups (through one-way ANOVA), respectively.

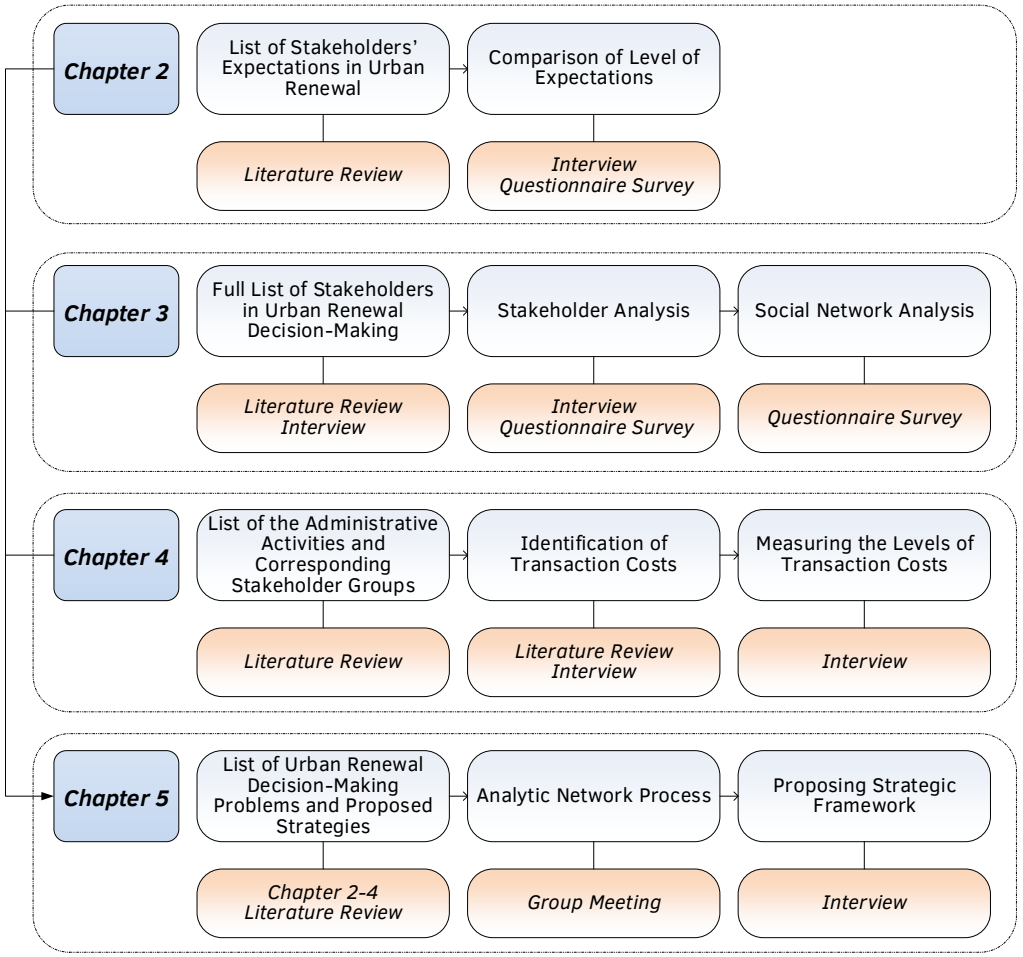

FIG. 1.4 Overview of Research Approach

In Chapter 3, the mixed methods of Stakeholder Analysis and Social Network Analysis, with quantitative and qualitative data, are processed into triangulation analysis to enrich the holistic understanding of stakeholder participation. Stakeholder Analysis helps to characterize and categorize the identified stakeholders based on different stakeholder characteristics. Social Network Analysis helps to explore the interdependencies between different stakeholders and stakeholder groups. In this Chapter, Literature review, interview, and questionnaire survey were also used for data collection. Based on the literature review and scholarly authors' knowledge, the preliminary list of stakeholders in urban renewal decision-making was developed. And then, semi-structured interviews were conducted to verify the stakeholder list and collect relevant qualitative data for the analysis. There were 23 individuals representing most of the listed stakeholders in 8 stakeholder groups being reached. The representatives include government officials, professors, real estate managers, and citizens, etc., who have gained rich practical experience and sufficient knowledge in urban renewal in Chongqing. And then, a questionnaire survey was designed and addressed to the verified list of stakeholders. The respondents were selected based on the following principles: (1) they represent one of the listed stakeholders; (2) they have experience in participating in urban renewal decision-making. The questionnaires were purposely distributed to all of the listed stakeholders via personal delivery and e-mail. Finally, a total of 46 valid questionnaires covering all the listed stakeholders were collected. The questionnaire comprised two parts. The first part was designed to understand the level of different characteristics of each selected stakeholder concerning urban renewal decision-making. Since these factors were self-reported, the values were triangulated to check the general consistency of the interviewees. In the second part, the respondents were asked to indicate all the other organizations/individuals with whom they interact within urban renewal decision-making. The interactive relationships between different stakeholders were analyzed in UCINET (Borgatti et al. , 2002).

In Chapter 4, the analytical framework was designed based on transaction costs theory to explore the urban renewal decision-making process in Chongqing, China. The research consists of three steps. The first step was to clarify the detailed administrative activities and corresponding stakeholder groups in each decision-making stage. The second step aimed at identifying the transaction costs borne by different stakeholder groups in each stage. The third step aimed at measuring the level of transaction costs incurred by different stakeholder groups. The literature review and interviews were adopted as sources of data in this chapter. Based on the literature review and scholarly authors' knowledge, the list of works (transactions) that different stakeholder groups need to do in the administrative process of urban renewal decision-making was developed. Then, the semi-structured interviews were applied for data collection. The interviews were conducted with 17 interviewees representing all targeted stakeholder

groups. All the selected representatives were professionals who have rich knowledge and practical experience in urban renewal projects in Chongqing. The interviews mainly helped to (1) clarify the administrative activities and their roles in decision-making; (2) verify the list of stakeholders' works during the decision-making process and illustrate each of them; and (3) rate the level of time they spend on each work.

Based on the results of Chapters 2, 3, and 4 and some relevant literature, the problems of current urban renewal decision-making in China are identified, and several strategies to deal with the issues are proposed. Based on the above, in Chapter 5, the method of the Analytic Network Process (ANP) was adopted to examine the priorities of the identified problems and strategies. A group meeting was conducted. The targeted interviewees in group meeting were selected based on the following principles: (1) they represent one of the key stakeholders; (2) they have the rich practical experience and sufficient knowledge in urban renewal decision-making; (3) at least half of them have a holistic view on urban renewal decision-making. Finally, there are seven individuals representing the key stakeholder groups being reached. The representatives include government officials in the municipal, district, and local administrative level, consultants (researchers), and a citizen, etc. Then, Super Decisions software was used to process the data(Liu et al. , 2003). When the ANP approach was finished, a strategic framework for solving the current urban renewal decision-making was proposed by authors. And then, six interviews were conducted to verify the results of model calculation and the proposed strategic framework.

1.6 Outline of the Thesis

This thesis consists of a collection of academic papers (Chapter 2 to 5), authored by the writer of this thesis, that has been submitted to or published in international, peer-reviewed scientific journals. Using the case of Chongqing, Chapter 2 explores the stakeholder participation in sustainable urban renewal in China by understanding the expectations of different stakeholder groups. Eighteen possible expectations are identified and compared among the five key stakeholders. Based on collected qualitative (interview) and quantitative (questionnaire survey) data, this chapter argues that there exist enormous differences of opinions and interests among stakeholder groups in diverse aspects. Further, the reasons for the huge differences are discussed.

Chapter 3 is also an empirical chapter. This chapter aims to understand the stakeholders and their participation in the decision-making of urban renewal in China. Using the case of Chongqing, the data were collected through in-depth interviews and a questionnaire survey. Stakeholder Analysis and Social Network Analysis were complemented as the research methodology. This chapter reveals the high complexity of stakeholder characteristics and the interaction network between them in urban renewal decision-making. Some critical barriers of decision-making, hidden behind the complex system, are also discussed.

Chapter 4 aims at adopting transaction costs theory to understand the administrative process of urban renewal decision-making in China. Using the case of Chongqing as well, this chapter focuses on four key stakeholder groups involving in such administrative process. Through the analysis, based on the in-depth interview, it reveals a long list of transaction costs that occurred in the urban renewal decision-making process. The causes of large-amount transaction costs are further discussed.

Chapter 5 conducts the holistic analysis based on the result of Chapters 2, 3, 4, and the literature review. The aim of this chapter is to systematically determine the strategies for improving urban renewal decision-making in China. The Analytic Network Process approach is employed in this chapter to provide a quantitative basis. First, the problems and proposed strategies are summarized. Then, by adopting the Analytic Network Process, the priorities of the problems and the strategies are examined based on the data collected through a group meeting. Finally, the results are evaluated, and a strategic framework for solving the urban renewal decision-making problems is proposed accordingly, and interviews are conducted for result verification.

Chapter 6 is the final chapter of this thesis. It summarizes the preceding chapters and concludes the answers to all research questions of this research. It also reflects upon the wider meaning and implications of this empirical study. Finally, recommendations for policy and future research are presented.

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2 Stakeholders' Expectations in Urban Renewal Projects in China

A Key Step towards Sustainability

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ABSTRACT

China's fast growth of economy and urbanization have driven large-scale urban renewal projects, thus triggering a wide spectrum of unsustainable problems. Little research has systematically explored the stakeholders' expectations in urban renewal projects in China. A deeper understanding of the divergent interests and expectations of the key stakeholder groups is an important step towards sustainable urban renewal. This paper aims to analyze the stakeholders' expectations on urban renewal projects. Eighteen factors are identified and compared among the main stakeholder groups: government sectors, consulting parties, the general public and in-situ residents in both redevelopment and rehabilitation projects, using questionnaire survey and interviews in Chongqing, China. The results reveal that there exist enormous differences of opinions and interests among stakeholder groups in all economic, environmental and social aspects. To achieve sustainable urban renewal in China, the governments ought to reconsider what the "public interest" stands for. In-situ residents should be understood and treated differently, based on the type of projects. An effective dialogue mechanism as well as supportive administrative and legal system should be established. Moreover, urban-renewal-related education and publicity should be a long-term strategy to change current awareness of different stakeholders, by improving their skill and willingness to participate.

KEYWORDS

urban renewal; stakeholders' expectations; social sustainability; China

2.1 Introduction

Urbanization is a driving force for economic growth. Since 2009, the world's urban population, for the first time, exceeded the rural population, marking a milestone in global urbanization (Jim, 2013). Taking China for example, from 1978 to 2015, the urban population climbed from 172 million to 771 million, and the urbanization rate increased from 17.92% to 56.10% (NBS, 2016). The economy and urban population have experienced an unprecedented rapid growth in China, due to its opening-up policy in 1978 (Li et al. , 2014, Qian, 2010). Based on the urbanization curve introduced by Northam (1979), a large amount of the Chinese rural population will keep moving into cities at a relatively high speed in the next decade. It is predicted that the level of urbanization will exceed 60% at the end of 2020, and reach 80% before 2030 (Li, Deng, 2014, Yue et al. , 2013).

To meet the fast-paced urbanization and economic growth, more high-quality buildings and neighborhoods are needed. In this context, urban sprawl and urban renewal become two major methods for meeting such demands (Liu et al. , 2012). Urban sprawl leads to the spread of cities over rural lands. Urban renewal, also named urban regeneration, brings improvement to the existing urban areas, which is a sound approach to cope with urban decay and achieve multiple socioeconomic goals (Adams and Hastings, 2001, Couch, 1990, Zheng et al. , 2014).

Urban renewal plays a vital role in improving life quality, and will keep bringing positive changes in urban areas in the near future (Chen et al. , 2008, Shen et al. , 2013). There are two major types of urban renewal projects: redevelopment and rehabilitation (Juan et al. , 2010b, Kohler and Hassler, 2002, Ma and Zhang, 2006). Redevelopment refers to the replacement of dilapidated buildings with new ones. Rehabilitation retains the buildings and neighborhoods through small-scaled physical change, such as building structural reinforcement, façade renovation, neighborhoods environment improvement, etc. In China, redevelopment is the dominant choice of decision makers and makes up the majority of urban renewal projects (Suo et al. , 2015).

Since the expansion of urban renewal projects, building demolition and reconstruction have climbed to a high level. Between 2011 and 2015, at least 460 million m2 of buildings were demolished in China (Zhang and Zeng, 2016). Based on China's current national planning, urban renewal projects will be implemented in more than 10 million households from 2013 to 2017 (SC, 2013). Moreover, the buildings and neighborhoods developed between the 1970s and 1990s account for more than 50% of urban renewal projects today (Liu, Xu, 2012). In those old

neighborhoods, many of the residents are vulnerable groups such as the elderly and those with low income (Zhu, 2009).

Large-scale and wide-spread urban renewal projects usually take place in the old neighborhood, which triggers a wide spectrum of social problems caused by the conflicts among various stakeholders (Liu, Xu, 2012). The multidimensional and complex nature of social problems requires integrated, coordinated and multifaceted strategies involving a wide range of stakeholders. Different stakeholders have unequal rights and powers, as well as diverse interests in urban renewal projects (Bromley et al. , 2005, Seo, 2002). Severe conflicts always emerge due to a lack of comprehensive recognition and evaluation of these different interests among the stakeholders during the urban renewal process (Hin and Xin, 2011). Therefore, an in-depth understanding of the divergent interests and expectations of the key stakeholders is an essential step to address social sustainability in the urban renewal process in China.

Social sustainability considers two dimensions: ethical values and norms (e.g., equity and justice) related to the broad engagement of stakeholders (Vallance et al. , 2011). Stakeholder participation benefits sustainable urban development in various ways and has been advocated in many studies (Couch and Dennemann, 2000, Garcia, 2004, Kaza, 2006). However, there is no one-fits-all approach, since the stakeholders' expectations may vary in different local contexts (Enserink and Koppenjan, 2007). In China, stakeholder participation is a challenging issue due to its unique market institution and social culture (Enserink and Koppenjan, 2007, Li et al. , 2012b).

Little research has systematically explored the stakeholders' expectations in different types of urban renewal projects in China. Thus, this paper aims to analyze the expectations of key stakeholder groups, namely, government sectors, consulting parties, the general public as well as in-situ residents, and compare them in both redevelopment and rehabilitation projects. This paper first presents a literature review of sustainability associated with urban renewal, redevelopment and rehabilitation projects, stakeholders and their expectations. Eighteen factors are identified and analyzed to compare amongst the stakeholder groups based on the results from questionnaire surveys and interviews. The finding reveals a huge disparity of expectations among different stakeholders. The externalities of the public interest, the stakeholders' awareness, and diverse needs in redevelopment and rehabilitation projects in China are discussed. The results shed light on some policy implications for how to optimize stakeholder participation and cooperation.

2.2 Literature Review

2.2.1 Sustainability in Urban Renewal

"Sustainability" was first introduced in the early 1970s to describe an economy "in equilibrium with basic ecological support systems" (Stivers, 1976). In 1987, "Our Common Future" defined "sustainable development" as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs (BC, 1987). The concept of sustainable development indicates a growing global awareness on environmental concerns, socio-economic issues on poverty and inequality, and a healthy future for humanity (Hopwood et al. , 2005, Smit and Pilifosova, 2003). Though it has various interpretations, there is an emerging agreement that it involves concerns of social, economic and environmental aspects (Ciegis et al. , 2009, Munasinghe, 1993, Redclift, 2005).

Over the last two decades, sustainable development theory has emerged and been commonly applied to urban renewal (Bromley, Tallon, 2005, Conroy and Berke, 2004), attracting a wide range of academic attention. In economic dimension, sustainable urban renewal refers to the rectification of urban decay, the effective use of urban land resources and the stimulation of lasting economic growth (Adams and Hastings, 2001, Basiago, 1998, Chan and Lee, 2008b). In narrow terms, economic sustainability of urban renewal also refers to sustainable government finance, sustainable investment and returns for developers, and the stability or increase of property prices in the standpoint of property owners, etc. (Juan, Roper, 2010b, Li and Brown, 1980). In China, the economic considerations are the main driving force of promoting urban renewal projects (Hin and Xin, 2011). However, putting too much emphasis on the economic aspect may lead to the neglect of environmental and social dimensions.

In the environmental dimension, sustainable urban renewal aims to improve environmental quality during the urban renewal process (Chan and Lee, 2009, Chan, 2002). On the one hand, it represents the improvement of the living environment, such as improving the natural environment, providing living convenience and comfort, etc.; on the other hand, it refers to energy conservation and emission reductions, e.g., green building promotion (Collier, 2011, Itard and Klunder, 2007, Pugh et al. , 2012). Although there is increasing research focusing on sustainable urban renewal, the debate is mostly dominated by environmental and economic

dimensions. There is relatively little research focusing on social sustainability, especially in the Chinese urban renewal context.

Social sustainability is defined as a process for creating a sustainable environment that maintains and improves wellbeing, by understanding what people need in life and at work (Woodcraft et al. , 2011). The key aspects of social sustainability in urban development include distribution of power and resources, participation in decision making, justice and equity in public issues, and provision of basic needs (e.g., housing, education, employment, etc.) (Bramley and Power, 2009, Chan and Lee, 2008a, Chiu, 2003, Polèse and Stren, 2000, Yung et al. , 2014). However, the urban system is involved in performing social-economic functions (Forrester, 1969). It is not easy to reduce social inequality and cleavages by addressing all needs from the wide-range of stakeholders (Dempsey et al. , 2011, Hemphill et al. , 2004, Pendlebury et al. , 2004). Therefore, identifying the (dis)agreements in expectations amongst various stakeholders in urban renewal becomes an essential research question.

In spite of much work that has been done to improve social sustainability, many unsatisfied scenarios have arisen as a result of in-situ residents, decision makers, the general public, etc., due to the social conflicts in urban renewal (Rothenberg, 1967, Sigsworth and Wilkinson, 1967, Yau and Chan, 2008). Without the satisfaction of major stakeholder groups, social sustainability cannot be achieved. Therefore, understanding stakeholders' interests and expectations is the premise and basis to improve social sustainability in urban renewal projects.

2.2.2 Redevelopment and Rehabilitation in Urban Renewal Projects

Redevelopment and rehabilitation are two main types of urban renewal projects in neighborhood areas. In terms of redevelopment, it is a direct way to root out the dilapidated buildings and neighborhoods and to rebuild new ones that can meet the quality and functional demands (Bullen and Love, 2010). From an economic perspective, it creates the investment value and rearranges the urban land (Yau and Chan, 2008). A large-scale redevelopment may produce a mass of construction and demolition waste and break the social network built in the existing neighborhoods (Itard and Klunder, 2007, Kartam et al. , 2004).

Rehabilitation brings speedy improvement of living conditions without demolishing existing buildings and relocating the in-situ residents. Compared to redevelopment, rehabilitation costs less money, keeps the existing social network, preserves the

heritage of the building style and neighborhood characters. It is also claimed to cause less harm to the environment (Ball, 1999, Ho et al. , 2011, Juan, Roper, 2010b, Power, 2008).

In China, much research has been done in the context of redevelopment and rehabilitation projects. For redevelopment, research focuses more on planning, land policy and governance. It is argued that history is repeating itself since China is experiencing the large-scale demolition that the western world experienced decades ago (Zhang and Fang, 2004). Because the lands are state owned but many buildings are private properties, land acquisition and residential relocation are always the most difficult issues to resolve (Wu, 2004). For the rehabilitation, most efforts have been done to improve technology or management in the building scales, especially energy efficiency retrofitting (Juan et al. , 2010a, Ouyang et al. , 2009). There is a disparity of interests and expectations between in-situ residents in redevelopment and rehabilitation due to their fundamental differences in approaches and outcomes. However, in China, the differences of residents' expectations are rarely considered and discussed in current urban renewal policy and research.

2.2.3 Stakeholders' Expectations in Urban Renewal

As one of the most commonly accepted definitions, stakeholders refer to the individuals or organizations that can influence or be affected by the urban renewal process (Freeman, 2010, Li et al. , 2012a, Petts and Leach, 2000). They have their own stake or interest in urban renewal projects. Being a complex social-economic system, the urban system requires a wide range of stakeholders to participate and coordinate during the urban renewal projects (Mayer et al. , 2005). The interdependence and coordination between different stakeholder groups during the urban renewal process is the key element towards success (Verhage, 2005).

It is of great importance to recognize that stakeholder participation focuses on stakeholder relationships, rather than manipulating or managing the stakeholders (Hörisch et al. , 2014). However, it is not necessary that all stakeholders should be on an equal footing (Phillips et al. , 2003). Due to the existence of mutual interests among different stakeholders, stakeholder relationships have the essence that creates the value for stakeholder participation and overcoming trade-offs (Freeman, 2010, Hörisch, Freeman, 2014). To better deal with such relationships, the priority is first to identify who are the key stakeholders.

According to Roberts and Sykes (1999), the list of stakeholder groups in urban renewal includes those who affect urban renewal in the process and outcomes as well as those who experience the impacts. Based on this, five stakeholder groups are identified and selected as the key stakeholder groups in urban renewal in China: government sectors, consulting parties, the general public, and in-situ residents in rehabilitation projects and redevelopment projects.

In China, government sectors are the most dominant stakeholder groups in urban renewal who establish the rule institution of urban renewal and directly influence the way other stakeholders participate (Greenwood and Newman, 2010). Consulting parties play an important role in urban renewal. Their knowledge and professional suggestions have a great impact on decision making and implementation. In the information age, the general public also engages in urban renewal projects through the internet, mass media, etc (Jaeger and Bertot, 2010). Public supervision and demands can push the agenda and in-situ residents are the ones who experience the greatest impact. Their satisfaction is essential to the success of urban renewal (Hui et al. , 2008). Although real estate developers, contractors and various suppliers are also important stakeholders, their expectation is clearly profit-driven and they work for private economic interests (Abidin, 2010, Brady et al. , 2005, Gruneberg, 2007). Therefore, expectations of these stakeholder groups are not elaborated in this research.

In urban renewal projects, stakeholders' expectations are complex and may vary from one stakeholder to another. Through the review of governmental documents and academic publications, 18 expectation factors are identified, shown in Table 2.1.

TABLE 2.1 Identified stakeholders' expectations in urban renewal projects.

Factor	Description	Reference
F1. Promotion of Local Development	Incl. economic growth indicators, e.g., GDP, investment environment, etc.	(CLC, 2016, CMPG, 2013, DB, 2011, Lee and Chan, 2008, Liao, 2013, Ng, 2005, SMPG, 2015, SPG, 2016, Wang, 2013)
F2. Optimization of Land Use	Rational land function to meet the requirement of sustainability	(CLC, 2016, CMPG, 2013, DB, 2011, DSD, 2014, Hemphill, Berry, 2004, Lee and Chan, 2008, Liao, 2013, Ng, 2005, SPG, 2016, Wallbaum et al. , 2010, Yang, 2014)
F3. Increase of Local Employment	To increase the employment rate of local people through urban renewal projects	(DSD, 2014, Hemphill, Berry, 2004, Lee and Chan, 2008, Liao, 2013, Qian, 2009, SMPG, 2015, Wang, 2013, Yang, 2014)
F4. Conservation of Cultural, Historical Value and local characteristics	To preserve the existing neighborhoods in urban renewal areas in terms of cultural, historical value, or unique local characters	(CLC, 2016, DB, 2011, Lee and Chan, 2008, Ng, 2005, SMPG, 2015, Wallbaum, Krank, 2010)
F5. Maintenance of Social Network and Neighborhood Relations	Social network and neighborhood relations built in the existing neighborhoods may consist valuable social capital to be maintained after urban renewal process	(DB, 2011, Lee and Chan, 2008, Liao, 2013, Wang, 2013)
F6. Improvement of Community Security	The criminal rate may be higher in the existing neighborhood, which is to be reduced in the new/rehabilitated neighborhoods	(DSD, 2014, Qian, 2009, Yang, 2014)
F7. Improvement of Geographic Accessibility	Urban renewal projects should improve the accessibility of the space through optimized transportation planning and system	(CLC, 2016, DB, 2011, Hemphill, Berry, 2004, Lee and Chan, 2008, Liu, 2006, Ng, 2005, Qian, 2009, SMPG, 2015, SPG, 2016, Wallbaum, Krank, 2010, Wang, 2013, Yang, 2014)
F8. Availability of Amenities, Community and Welfare Facilities in the Area	Urban renewal should improve the availability and accessibility of basic amenities and community facilities	(CLC, 2016, DB, 2011, DSD, 2014, Hemphill, Berry, 2004, Liao, 2013, Liu, 2006, Ng, 2005, Qian, 2009, SMPG, 2015, SPG, 2016, Wallbaum, Krank, 2010, Wang, 2013)
F9. Economic Benefits to Governments and Local People	1) Financial benefit, such as the benefit from future land leasing. 2) increase of income, such as rental income, and the decrease of living cost, including energy, transportation, service facilities, etc.	(Hemphill, Berry, 2004, Ng, 2005, Qian, 2009, Wang, 2013) (Liu, 2006, Yang, 2014)

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TABLE 2.1 Identified stakeholders' expectations in urban renewal projects.

Factor	Description	Reference
F10. Good Relocation and Compensation Plan	Urban renewal projects provide a fair compensation plan for the in-situ residents to upgrade their living environment, as part of social equity and justice.	(CMPG, 2013, Liao, 2013, SPG, 2016, Wallbaum, Krank, 2010, Wang, 2013, Yang, 2014)
F11. Maintenance of Social Stability	To minimize the social conflicts during the urban renewal process	(CMPG, 2013, Ng, 2005, SMPG, 2015)
F12. Transparency of Urban Renewal Process	Urban renewal is a public issue, which the information should be kept transparent to the public	(Liao, 2013, SMPG, 2015, SPG, 2016)
F13. Increase of Participation and Cooperation	Different stakeholder groups are actively involved and well communicated in urban renewal process	(CLC, 2016, CMPG, 2013, DSD, 2014, Hemphill, Berry, 2004, Lee and Chan, 2008, Liao, 2013, Liu, 2006, Ng, 2005, Qian, 2009, SMPG, 2015, Wang, 2013)
F14. Improvement of Neighborhood Sanitary and Natural Environment	Many old neighborhoods have poor hygienic conditions and low green rate, which should be improved through urban renewal	(CLC, 2016, DB, 2011, Hemphill, Berry, 2004, Liao, 2013, Liu, 2006, Ng, 2005, Qian, 2009, SMPG, 2015, SPG, 2016, Wallbaum, Krank, 2010, Wang, 2013, Yang, 2014)
F15. Beautification of Landscape and Buildings	To bring aesthetic values for the neighborhoods through architecture and landscape design	(DB, 2011, DSD, 2014, Liao, 2013, Liu, 2006, Ng, 2005, SMPG, 2015, SPG, 2016, Wang, 2013)
F16. Improvement of Building Safety	To meet the requirement of building safety, including structural safety, fire safety, etc.	(CLC, 2016, CMPG, 2013, DB, 2011, DSD, 2014, Lee and Chan, 2008, Liu, 2006, Qian, 2009, SMPG, 2015, SPG, 2016, Wang, 2013, Yang, 2014)
F17. Improvement of Living Comfort in the Buildings	To guarantee the adequate living functions (e.g., elevators, independent toilets), layout and space, air ventilation, acoustical and illumination environment, etc. that increase the sense of comfort of residents	(DSD, 2014, Lee and Chan, 2008, Liu, 2006, Qian, 2009, Wang, 2013, Yang, 2014)
F18. Construction or Renovation of Green Buildings	To meet the requirement of building energy efficiency	(Hemphill, Berry, 2004, Lee and Chan, 2008, SPG, 2016, Wallbaum, Krank, 2010)

2.3 Research Methodology

2.3.1 Interview

As shown in Table 2.2, semi-structured interviews were conducted with 23 interviewees representing different stakeholder groups in urban renewal in China. All the selected representatives are authorities, professionals, or citizens who have either gained rich practical experience or sufficient knowledge in urban renewal.

TABLE 2.2 Groups and Background of the Interviewees.

Group/No.	Cd.	Profile
Government Sectors (10)	G1	Officer in Chongqing Municipal Commission of Development and Reform
	G2	Officer in Chongqing Municipal Bureau of Urban Planning
	G3	Officer in Chongqing Municipal Administration of Land, Resources and Housing
	G4	Officer in Chongqing Municipal Commission of Urban-Rural Development
	G5	Officer in Yuzhong District Bureau of Land and Resources
	G6	Officer in Yuzhong District Bureau of Housing Management
	G7	Officer in Yuzhong District Bureau of Urban Planning
	G8	Officer in Yuzhong District Commission of Development and Reform
	G9	Officer in Shangqingsi Sub-district Administrative Office
	G10	Officer in Jiaxicun Neighborhood Committee
Consulting Parties (5)	C1	Professor in Chongqing University
	C2	Researcher in Tongji University
	C3	Researcher in Chongqing University
	C4	Professor in Chongqing University
	C5	Consultant in Chongqing Planning and Design Institute
Developers (2)	D1	Manager in a Real Estate Development Company
	D2	Employee in a Real Estate Development Company
Financial Institutions (1)	F1	Employee in China Development Bank
In-situ residents (3)	R1	Resident of a Neighborhood that will be Redeveloped
	R2	Resident of a Neighborhood that will be Redeveloped
	R3	Resident of a Neighborhood that is under Rehabilitation
General Public (2)	P1	Ordinary Citizen in Yuzhong District, Chongqing
	P2	Ordinary Citizen in Yuzhong District, Chongqing

In urban renewal projects, government interviewees include representatives from planning, land, housing, development, etc., sectors at local administrative, district and municipal levels. For this reason, ten representatives were selected to be interviewed. For consulting parties, five representatives from academia and industry, with rich experience in providing consulting services in urban renewal projects, participated in the interview. Three interviewees representing the perspectives from developers and financial institutions, also gave insightful and reflective views on urban renewal. The interviewees from in-situ residents and the general public are either those who are currently participating in or have participated in urban renewal projects.

Yuzhong District, Chongqing city, China, is selected as the case study area. Yuzhong District is the capital of Chongqing and has played a significant role in the history of Chongqing's urban development. Two case projects in Yuzhong District are selected to represent the redevelopment and rehabilitation projects respectively, which is shown in Figure 2.1.

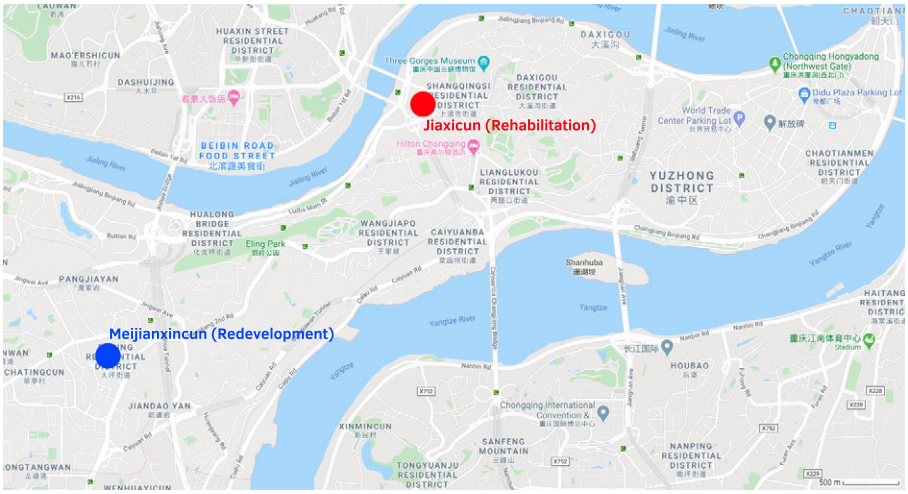

FIG. 2.1 Map of two case projects in Yuzhong District, Chongqing, China

The redevelopment project named Meijianxincun is located in the Daping sub-district. It was planned to be redeveloped in 2016 because the neighborhood is close to a CBD, but there is a poor surrounding environment, with many old and dilapidated residential buildings built from the 1970s to 1990s. It is a typical project, with a median size (around 19,000 m2), median household number (1100 potentially in-situ residents), and most of the residents are vulnerable groups.

TOC

The rehabilitation project is named Jiaxicun, located in the Shangqingsi sub-district. Buildings in the neighborhood were built from the 1950s to the 1990s. It is a successful rehabilitation project since it meets the purpose of improving life quality and preserving the cultural value, which has benefited more than 6000 low-income residents. The rehabilitation methods include façade renovation, improvement of the surrounding environment, expansion of building space, and building structural reinforcement. The project was planned in 2013 and will be completed in 2017.

Three interviewees from in-situ residents were selected from these two cases. For the general public, two representatives living close to the above urban renewal areas were selected, with sufficient background knowledge of the urban renewal projects.

The interview consists of four major discussions: (1) verification of the listed stakeholders' expectations and the target sample; (2) current roles of the stakeholders; (3) conflicts among the stakeholders; and (4) barriers to current participation and cooperation.

Through the interviews, the listed stakeholders' expectations were verified, and the target stakeholder groups for questionnaire survey were adjusted. In the original research design, the target groups comprise relevant government sectors, consulting parties, in-situ residents, the general public and NGOs. NGOs were removed from the list, due to the rare involvement of NGOs in urban renewal projects in China. In addition, in-situ residents were separated into rehabilitation and redevelopment projects, due to the contrasting opinions of the in-situ residents in these two scenarios.

2.3.2 Questionnaire Survey

Based on the verification of identified stakeholders' expectations and target groups, a questionnaire survey was conducted to collect the required information. The respondents were asked to score the significance level of each factor. The level of significance is measured on a five-point Likert scale, where 1 = "extremely unimportant", 2 = "unimportant", 3 = "neutral", 4 = "important", and 5 = "extremely important".

The questionnaires were distributed over the internet and via personal delivery to increase the response rate and sample representation. The questionnaires were delivered to people representing five different stakeholder groups. Potential respondents from government sectors, consulting parties, in-situ residents in two

types of projects were purposely selected, ensuring most of them possess adequate knowledge or experience in urban renewal. The distribution in governments covers all relevant key sectors in local administrative, municipal, district and municipal levels. For the in-situ residents, the survey was conducted in two above-mentioned urban renewal projects. For the general public, questionnaires were collected from randomly selected respondents through the internet survey, which increases the sample representation.

A total of 830 questionnaires were delivered to the respondents. As shown in Table 2.3, 257 valid questionnaires covering the relatively balanced amount of five different groups are collected, which represents a 30.96% response rate. This rate is acceptable and common (Baruch and Holtom, 2008, Porter and Whitcomb, 2003).

TABLE 2.3 Summary of Respondents in the Questionnaire Survey

Type of Group	Number	Percentage (%)
Government sectors	54	21.0
Consulting parties	55	21.4
General public	52	20.2
In-situ residents in Redevelopment Projects	49	19.1
In-situ residents in Rehabilitation Projects	47	18.3
Total	257	100

2.3.3 Data Analysis Method

Based on Norman's research in 2010, compelling evidence dating back nearly 80 years shows that using data from Likert scales, parametric tests are generally more robust than non-parametric tests, even with small sample sizes, unequal variances, and non-normal distributions (Norman, 2010). Therefore, parametric tests are adopted for data analysis in this paper.

First, the mean score of each factor is calculated to compare its importance level in each stakeholder group. Second, the mean scores are compared within different pairs of groups. Before the comparison, Levene's test is applied to assess the assumption that the variances between two particular groups are equal. The threshold probability value p is 0.05. Then, an independent t-test is adopted to test whether the mean scores given by two stakeholder groups are significantly different. The threshold probability value p (two-tailed) is also 0.05. Third, one-way ANOVA is

adopted to clarify whether the whole picture of the expectations of all stakeholder groups in urban renewal projects differs. Levene's test is used again to determine the equality of variances among the five groups with the threshold value $p < 0.05$.

2.4 Data Analysis and Results

2.4.1 Comparison of Expectations within Each Stakeholder Group

TABLE 2.4 Mean Scores of Expectations of different stakeholder groups in urban renewal projects.

Cd.	Government Sectors			Consulting Parties			General Publics			In-situ residents (Redevelopment)			In-situ residents (Rehabilitation)		
	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank
F1	4.78	0.50	**1**	4.15	0.70	6	4.42	0.64	**1**	2.59	0.98	11	3.32	1.42	18
F2	4.56	0.57	**3**	4.4	0.68	**2**	4.02	0.98	9	2.43	1.02	16	3.38	1.21	17
F3	3.89	0.88	9	3.44	0.79	12	4.08	0.80	6	2.94	0.92	6	3.74	0.67	14
F4	3.83	0.77	10	4.2	0.70	4	4.12	0.80	4	2.82	1.20	7	3.45	0.88	16
F5	2.24	1.03	18	2.82	1.02	17	3.56	0.94	17	3.92	0.79	**3**	4.21	0.88	11
F6	3.57	0.79	14	3.15	0.68	14	3.96	0.91	11	2.55	1.06	13	4.09	1.02	13
F7	4.22	0.94	6	4.16	0.94	5	3.75	0.93	15	2.67	1.14	9	4.32	0.52	10
F8	4.39	0.71	4	4.38	0.78	**3**	4.04	0.74	8	2.76	1.20	8	4.34	0.76	8
F9	4.09	0.71	8	3.36	0.80	13	3.73	0.93	16	2.33	0.82	18	4.38	0.61	6
F10	3.78	0.90	11	2.73	1.04	18	4.23	0.83	**3**	4.84	0.51	**1**	4.51	0.66	**2**
F11	4.59	0.69	**2**	3.13	0.98	15	3.98	0.96	10	2.51	0.96	15	3.55	0.95	15
F12	3.3	0.90	17	2.85	1.03	16	3.77	1.00	14	4.61	0.67	**2**	4.19	0.82	12
F13	4.35	0.89	5	4.53	0.63	**1**	3.46	0.96	18	3.9	1.03	4	4.47	0.58	**3**
F14	3.74	0.81	12	3.71	0.90	9	4.1	0.91	5	2.57	1.27	12	4.45	0.62	4
F15	3.7	0.94	13	3.82	0.90	8	3.9	0.91	13	2.53	1.04	14	4.36	0.92	7
F16	4.2	0.79	7	3.85	0.85	7	4.37	0.79	**2**	2.98	1.35	5	4.72	0.50	**1**
F17	3.43	1.06	15	3.53	0.86	10	3.92	0.90	12	2.61	1.30	10	4.34	0.70	8
F18	3.37	1.10	16	3.45	0.92	11	4.06	0.89	7	2.39	1.27	17	4.4	0.61	5

The importance level of all factors in each group is measured by mean scores and summarized with standard deviation and rankings in Table 2.4. The standard deviations of the three highest mean scores in each group range from 0.50 to 0.83. These low standard deviations indicate that the data are reliable because they are clustered closely around the means.

As presented in Table 2.4, Promotion of Local Development (F1), Maintenance of Social Stability (F11) and Optimization of Land Use (F2) are the top three ranks for the government. According to eight interviewees from the government, the major interest of the government in urban renewal projects is to benefit the "public interest". Renewing the old urban areas can indeed benefit the quality of life of the citizens. Essentially, "public interest" has a broader connotation. Achieving "public interest" represents stimulating economic development, rational use of land, and minimum social contradiction during the renewal process. This is also considered as the success of urban renewal.

The respondents of consulting parties give the highest scores to Increase Participation and Cooperation (F13). Followed by the Optimization of Land Use (F2), Availability of Amenities, Community and Welfare Facilities in the Area (F8), Historical Value and local characteristics (F4) and Improvement of Geographic Accessibility (F7) ranking the second, third, fourth and fifth place, respectively. They are the key professionals who give suggestions to influence urban renewal. The opinions of consulting parties are the important basis for planning, project reviewing, and approving, etc., throughout the urban renewal process. According to all the interviewees from consulting parties, they hope to achieve their personal/enterprise values by providing professional consulting services. Therefore, consultants strongly expect to be more involved in the urban renewal process. Furthermore, the land use, historical protection, amenities/facilities, and accessibility are major technical factors that should be seriously considered.

For the general public, none of the factors are unimportant since none of them are scored less than 3.46. Among all factors, the general public place much more concern on Promotion of Local Development (F1), Improvement of Building Safety (F16) and a Good Relocation and Compensation Plan (F10). Following the interviewees' opinions from the public, urban development is one of the most important issues that brings higher quality of life for the whole society. The development should not be founded on the violation of rights and interests of local residents.

From the perspective of the in-situ residents in redevelopment projects, Good Relocation and Compensation Plan (F10), Transparency of Renewal Process (F12), Maintenance of Social Network and Neighborhood Relations (F5) and Increase of Participation and Cooperation (F13) are the major four criteria that receive a mean score higher than 3.9. All of the other factors are considered as unimportant as they are scored less than 3. It is also reported by the interviewees from in-situ residents that they are rarely offered opportunities to be involved in the urban renewal process; rather, they are mostly affected during the execution of the projects. Since they must move out of the place after the projects are completed, they do not care much about what the projects can profit the society. All they care about is to gain enough information and participate in the decision-making process to maximize their economic interests.

The in-situ residents in rehabilitation projects are most concerned about Improvement of Building Safety (F16), Good Relocation and Compensation Plan (F10) and Increase of Participation and Cooperation (F13), Neighborhood Sanitary and Natural Environment (F14), and Construction or Renovation of Green Buildings (F18). Besides, they also give relatively high scores to all other factors, none of which is less than 3.32. The in-situ residents are also the end-users who benefit from the change of their neighborhoods and dwellings. Therefore, they are eager to be involved and to contribute their ideas to the project. In this way, their living environment is greatly improved, and they can obtain a reasonable economic benefit, including financial support from the government, an increase in property value and rental income, etc.

2.4.2 Comparison of Expectations between Pair of Stakeholder Groups

As shown in Table 2.5, through independent t-test, the mean differences between pairs of groups proved to be significant are listed (GS = Government Sectors, CP = Consulting Parties, GP = General Public, IRR = In-situ residents in Rehabilitation Project, IRD = In-situ residents in Redevelopment Project).

From an overall perspective, the expectations of in-situ residents in redevelopment projects are greatly different from other stakeholders. With only one exemption, every factor in all four comparisons between them and other groups have a significant difference in mean scores. Moreover, most mean differences of the factors are more than 1.000, which accounts for both 14/18 compared to government sectors and the general public, 12/18 compared to academics/consultants, and 10/18 compared to in-situ residents in rehabilitation projects.

TABLE 2.5 Significant Mean Differences between Pairs of Stakeholder Groups.

Factor	GS & CP	GS & GP	GS & IRR	IRD & GS	IRD & CP	IRD & GP	IRD & IRR	CP & GP	CP & IRR	GP & IRR
F1	0,632	0.355	1,459	2,186	1,554	1,554	-0,727	-	0,826	1,104
F2	- [1]	0.536	1,173	2,127	1,971	1,971	-0,954	0,381	1,017	0,636
F3	0,453	-	-	0,950	0,498	0,498	-0,806	-0,641	-	0,332
F4	-0,367	-	0,387	1,017	1,384	1,384	-0,630	-	0,753	0,669
F5	-0,577	-	-1,972	-1,678	-1,100	-1,100	-	-0,740	-1,395	-0,655
F6	0,429	-0.387	-0,511	1,023	0,594	0,594	-1,534	-0,816	-0,940	-
F7	-	0.472	-	1,549	1,490	1,490	-1,646	0,414	-	-0,569
F8	-	0.350	-	1,634	1,627	1,627	-1,585	0,343	-	-
F9	0,729	-	-0,290	1,766	1,037	1,037	-2,056	-	-1,019	-0,652
F10	1,051	-0.453	-0,733	-1,059	-2,109	-2,109	0,326	-1,503	-1,783	-
F11	1,465	0.612	1,039	2,082	0,617	0,617	-1,043	-0,853	-	-
F12	0,442	-0.473	-0,895	-1,316	-1,758	-1,758	0,421	-0,915	-1,337	-0,422
F13	-	0.890	-	0,454	0,629	0,629	-0,570	1,066	-	-1,007
F14	-	-	-0,706	1,169	1,138	1,138	-1,875	-	-0,738	-
F15	-	-	-0,658	1,173	1,288	1,288	-1,831	-	-0,544	-0,458
F16	0,349	-	-0,520	1,224	0,875	0,875	-1,744	-0,511	-0,869	-0,358
F17	-	-0.497	-0,914	0,814	0,915	0,915	-1,728	-0,396	-0,813	-0,417
F18	-	-0.687	-1,034	0,983	1,067	1,067	-2,017	-0,603	-0,950	-0,347

2.4.2.1 Comparison between Government Sectors and the Others

The comparison between government sectors and consulting parties shows that 10 out of 18 factors have significant differences in the mean scores of expectations. The greatest mean differences are Maintenance of Social Stability (F11), Good Relocation and Compensation Plan (F10) and Economic Benefits to Governments and Local People (F9). As pointed out by four interviewees from the group of consulting parties, in many instances, their suggestions are not what the government expected. Government focuses much more on maintaining social stability, fiscal revenue and balance when initiating the urban renewal projects, while the consultants give higher priority to the technical factors. In practice, consultants often change their minds and compromise. As described by a representative of consulting parties: “We often adopt the stance of the governments and use our knowledge to demonstrate the rationality of their targets. What we often do in practice is to support what they want to do”.

Comparing government sectors with the general public, there are a total of 11/18 criteria that are significantly different expectations. Among those factors, the mean difference of the Increase of Participation and Cooperation (F13) is the greatest, followed by Construction or Renovation of Green Buildings (F18) and Maintenance of Social Stability (F11). However, none of the mean differences is higher than 0.89, which is relatively low. Based on most of the interviewees from government sectors and the general public, more and more of the general public attempts to oversee and monitor their exercise of power. Since many negative reports about the social inequality and environmental problems have been published in recent years, the public is more concerned with such problems and has strong enthusiasm to be involved in pushing improvement during the urban renewal process.

There are 14 out of 18 factors in the different importance levels in the comparison between government sectors and in-situ residents in the rehabilitation project. Among the others, the top three different expectations are Maintenance of Social Network and Neighborhood Relations (F5), Promotion of Local Development (F1), and Optimization of Land Use (F2). According to the seven interviewees from these two stakeholder groups, although the in-situ residents can benefit from urban development, they pay little attention to these issues. Instead, they care much about the improvement of their own living environment and economic benefits. The social network built in the existing neighborhood in decades is also treasured by the residents. They do not want to lose any relationship when urban renewal takes place in their neighborhood. While from the perspective of the government, these relations are almost ignored in decision-making, planning, projects review, and all the other steps in urban renewal.

2.4.2.2 Comparison between In-situ Residents in Redevelopment Projects and the Others

As shown in Table 2.5, the strongest disagreements between in-situ residents in redevelopment projects and government sectors are Promotion of Local Development (F1) and Optimization of Land Use (F2) and Maintenance of Social Stability (F11). These are three factors of most concern for government sectors and are recognized as the core of the public interest that must be achieved. However, in-situ residents in redevelopment projects care little about macro urban development. As stated by two representatives of in-situ residents in redevelopment projects, “public interest is indeed the consensus that urban renewal should achieve, but being in the group that suffers the most in the projects, we do not feel we are recognized as part of the public. In most of the cases, we do not benefit from such urban development”.

Similarly, Promotion of Local Development (F1) and Optimization of Land Use (F2) are also two of the three top disagreements between in-situ residents in redevelopment projects and the general public, which can be seen in Table 2.4. Thus, these are not only the conflicts between the in-situ residents and major decision makers but also the gap between them and the unaffected public.

The most conflicting opinions between in-situ residents in redevelopment projects and consulting parties are Good Relocation and Compensation Plan (F10), Optimization of Land Use (F2), and Transparency of Renewal Process (F12). From the perspective of the four representatives of consultants, guaranteeing social equality is rarely considered when providing consulting services in urban renewal. Because of the lack of rational accountability, consultants are not expected to be accountable for their work when the projects raise conflict between governments and other groups. Based on the interviews with the representatives of these in-situ residents, the relocation or compensation from the governments are the vital opportunities to improve their living condition. It also includes obtaining huge economic benefits because of the skyrocketing property prices. Therefore, they have a strong incentive to interfere with decision making and stay informed in the urban renewal process.

The comparison between different types of in-situ residents shows that although they are both affected groups, they greatly vary in expectations. Economic Benefits to Governments and Local People (F9) rank the first in mean differences, followed by the factors on the improvement of old neighborhood (from F14 to F18). Because the in-situ residents in rehabilitation projects do not move out of the old neighborhoods, the rehabilitation of their neighborhoods and dwellings are their core interests. According to an interview with a resident of a neighborhood under rehabilitation, most of the house owners appreciate the changes that are brought by urban renewal. Through urban renewal, they can gain a better living environment and obtain more rental income with an increase in land and property value. Comparing residents in redevelopment projects who move out of their old residence, they do not expect these factors. Social Network and Neighborhood Relations (F5) is the only criterion that has a similar opinion between the two groups. Both stakeholder groups strongly value the relationships built in their old neighborhoods and hope to keep them after the projects are finished.

2.4.2.3 Comparison between Other Pairs of Stakeholder Groups

A significant difference in mean scores appears for 13 factors in the comparison between consulting parties and the general public. The top three largest differences are Good Relocation and Compensation Plan (F10), Increase of Participation and Cooperation (F13), and Transparency of Renewal Process (F12). As indicated by the interviewees, if the urban renewal projects do not have a direct impact on them, few of the general public are willing to strongly participate in the process. Instead, indirect involvement and monitoring the right protection for the in-situ residents are the roles they are willing to play. In the view of consulting parties, they hope they can participate more in the decision-making process. As three interviewees state: "We hope to have a greater influence on decision making rather than support governments' decision". Moreover, although all the consultant interviewees agree that the lay pubic and in-situ residents have the right to the latest information, they are skeptical that information transparency may lead to over-interference of the renewal process.

Thirteen factors have different importance levels in the perspective of both consulting parties and in-situ residents in the rehabilitation project. Similarly, Good Relocation and Compensation Plan (F10) and Transparency of Renewal Process (F12) are two of the top three different expectations. Maintenance of Social Network and Neighborhood Relations (F5) is the other one. Pointed out by an academic interviewee, the social network in the old neighborhoods is the hidden social asset that should be well protected. Although it has raised more attention in urban governance and planning today, it is still ignored by many consultants when providing consulting services in the industry.

For the comparison between the general public and in-situ residents in rehabilitation projects, there are 13 factors considered significantly different by the two groups. Among these, the mean differences of Promotion of Local Development (F1), Increase of Participation and Cooperation (F13) and Historical Value and local characteristics (F4) rank the top three. One of the most distinguishing characteristics between these two stakeholder groups is whether an urban renewal project can affect the residents directly or indirectly. Thus, the in-situ residents in rehabilitation projects expect much of their involvement to better improve their living environment and economic interests. Compared to the general public, macro-level benefits such as local development and cultural protection are much less important for the in-situ residents in rehabilitation projects.

2.4.3 Comparison of Expectations among all Stakeholder Groups

To investigate the agreement on the expectation factors amongst all stakeholder groups in urban renewal projects overall, one-way ANOVA is adopted, which is shown in Table 2.6.

TABLE 2.6 Test of Significant Difference among All Stakeholder Groups.

Factor	Between Groups		Within Groups		F	Sig.
	Sum of Squares	df	Sum of Squares	df		
F1	158.816	4	208.912	252	47.893	0.000
F2	153.450	4	208.620	252	46.339	0.000
F3	40.084	4	180.305	252	14.006	0.000
F4	64.954	4	196.572	252	20.817	0.000
F5	134.672	4	222.425	252	38.145	0.000
F6	78.076	4	201.745	252	24.381	0.000
F7	91.537	4	211.599	252	27.254	0.000
F8	97.643	4	187.353	252	32.834	0.000
F9	125.238	4	207.377	252	38.047	0.000
F10	140.991	4	169.912	252	52.277	0.000
F11	131.070	4	235.989	252	34.991	0.000
F12	100.457	4	204.236	252	30.988	0.000
F13	42.534	4	177.139	252	15.127	0.000
F14	96.841	4	241.852	252	25.226	0.000
F15	90.206	4	219.015	252	25.948	0.000
F16	85.823	4	202.037	252	26.762	0.000
F17	80.524	4	244.791	252	20.724	0.000
F18	116.023	4	246.008	252	29.712	0.000

With the probability p values all approximately equal to 0.000, it is obvious that no identified factors are expected at the same level among five stakeholder groups. The mean scores of Good Relocation and Compensation Plan (F10), Promotion of Local Development (F1) and Optimization of Land Use (F2) have the highest F value, which implies they received the most different opinions among all stakeholder groups. The Increase of Local Employment (F3) and Increase of Participation and Cooperation (F13) are the factors that receive minimal different views.

Based on the interview with eight government officers, rational land use and stimulating local development are the two basic elements of public interest. For governments, these are two top priorities when making decisions, which are also

echoed by the consultants when offering consulting services. This is in agreement with the respondents of the general public. In their view, urban renewal should benefit the people living in old neighborhoods, but more importantly, it should promote the development of the city and bring benefits to all citizens. Nevertheless, in the perspective of in-situ residents in both redevelopment and rehabilitation projects, there are different opinions. Even though all the respondents of in-situ residents can understand its importance, they do not care much about this issue. On the contrary, they strongly expect to achieve their personal interest, especially compensation and relocation. Because many of the residents living in old neighborhoods are old, low-educated and low-income people, this is the only way for them to improve their living condition and life quality. According to interviewees from the consulting parties and government sectors, in many instances, the expectations of in-situ residents are irrational. The compensations they request are several times over the market value of their properties.

Although employment is highlighted as an important goal that urban renewal should achieve, this factor is neither ignored nor highly valued by all stakeholder groups. They all emphasize the need to improve their participation in urban renewal projects. Both the government sectors and consulting parties want to strengthen their discourse, and believe that their expertise can guarantee the success of urban renewal. However, the starting points of the general public and the in-situ residents are different. The general public believes their supervision can support the achievements of public interest and social equality, and the in-situ residents hold the view that their participation is the optimal method to maximize their private interests.

2.5 Discussion

2.5.1 Stakeholders' Expectations in Sustainable Urban Renewal

The findings of this research deliver valuable information for understanding the expectations of different stakeholder groups in urban renewal projects. In sustainable urban renewal, there has been much research concerning elements in social dimension such as employment, equity, social network, cultural value, participation, etc. (Chan and Lee, 2008a, Hemphill, Berry, 2004, Zheng, Shen,

2014). Maintaining social stability in urban renewal process is seldom mentioned. While in the Chinese context, it is even disagreed by many other stakeholders; this is still one of the top issues attached by the government. The social network in the neighborhoods is emphasized as a valuable social asset (Liao, 2013, Wang, 2013). Nevertheless, it is almost ignored by both government and consultants though it is extremely important for the in-situ residents. Moreover, Sanoff (2008) points out that consultants (designers and planners) are more willing to advocate information sharing because it promotes stakeholder participation and improves the quality of consulting services. However, the consulting parties in China are not willing to share information because they believe that it may reduce the efficiency and quality of the urban renewal process.

In the environmental dimension, energy efficiency and green buildings are recognized as parts of the top priorities in urban renewal for dealing with pollution and climate change (Itard and Klunder, 2007). In China, plenty of energy policies have been issued to promote building energy efficiency retrofitting and green building construction in recent years (Xu et al. , 2015, Ye et al. , 2015). However, even though it is of concern for the public and residents in-situ (rehabilitation), it is not always on the agenda when conducting urban renewal projects. Compared to many other factors, energy efficiency and green buildings are relatively less important for governments and consultants.

Hin and Xin (2011) highlight that economic consideration is of high priority in promoting urban renewal projects in China. Indeed, economic benefits are seriously expected by all stakeholder groups, but these expectations have different standpoints. Government and the public are more concern about local economic development, while the in-situ residents pursue their private economic interests. This disparity may challenge the core value of “public interest” in China.

2.5.2 Content of Public Interest

Generally, public interest represents the welfare or well-being of the public. In China, “public interest” is defined by the government as a macro-scope interest, attaching special importance to the urban development and social stability in urban renewal. Government-led, also referred to as top-down approaches, have been criticized by many researchers, with the argument that it causes unsustainability in urban renewal, including social inequality and conflicts (Bromley, Tallon, 2005, Brownill and Carpenter, 2009, Dezvoltării and și Locuințelor, 2007). But in the principle of “public interest”, these approaches have also brought about a tremendous development and

prosperity in China in recent decades (Liao, 2013, Wang, 2013). In the view of the general public, they appreciate governments' effort in achieving public interest since their quality of life has undergone a noticeable improvement.

Nevertheless, governments focus the effort on achieving public interest, yet their expectations are in sharp contrast to the in-situ residents. The in-situ residents complain that it is unfair to sacrifice their interests to benefit the other stakeholders. It seems that the term "public" does not include all the citizens, and the in-situ residents are left out of the group. Argued by Ho (2013), the "public interest" is the ex-ante welfare; it may lead to the failure of public policy without impartially assessing who should benefit or be well protected. Levine and Forrence (1990) state that to define public interest, it is crucial to assess the scenarios concerning relevant public, demands, and restraints, etc. Understanding and providing the basic needs of in-situ residents are key elements of social sustainability in urban renewal (Yung, Chan, 2014). If the in-situ residents cannot really benefit from the achievement of public interest, urban renewal will never meet the expectation of sustainability. Thus, it is of significance for the government to redefine "public interest", which not only cares about the urban development in the macro scope but also pays more attention to the human needs at the micro level.

2.5.3 Diverse Needs in Redevelopment and Rehabilitation Projects

Technically, there is a widely-accepted consensus that redevelopment and rehabilitation change the urban areas in different ways (Juan, Roper, 2010b, Yau and Chan, 2008). In many urban-renewal-related policies in China, these two types are mentioned together and share some similar parts of decision making process (CMPG, 2013, SMPG, 2015, SPG, 2016). The relevant planning, evaluation and projects confirmation, etc. are done by government sectors with the support of consulting parties. Juan, Roper (2010b) highlight the importance of stakeholder's acceptance in optimizing decision making of urban renewal in both redevelopment and rehabilitation projects. However, this research demonstrates that there is a huge disparity of expectations between in-situ residents in the two types of projects. Staying in the same neighborhoods or moving out to a new one greatly influences the residents' perceptions. To improve the understanding of diverse needs in different types of projects, it will be beneficial to hear more voices from the affected groups.

2.5.4 Awareness of Different Stakeholders

Stakeholder participation is a powerful driving force to effective planning and development that guarantee the success of urban renewal (Jung et al. , 2015, Kaza, 2006). However, Maitland (2006) states the importance of understanding the stakeholders' willingness and awareness, in order to ensure the effectiveness of their involvement. Greene (1987) points out that stakeholders' awareness has a great impact on their participation and cooperation. Most of the stakeholder groups have strong willingness to increase their involvement in urban renewal projects. However, it does not mean the outcomes can be improved if they are more involved.

The awareness of different stakeholders is one of the major barriers to achieving sustainability in urban renewal. There exists strong distrust or disrespect of one group towards many others. Government sectors believe that they can see the whole picture and provide the best way to achieve public interest, but the in-situ residents and general public are overly concerned with the immediate interest and cannot understand governments' thought process. Consulting parties harbor the view that other stakeholders cannot well understand the core of urban problems. The general public believes that government sectors and the consultants cannot really protect the rights and interests of the in-situ residents. Therefore, it is of great importance for the general public to push urban development toward a more sustainable path. In both types of projects, the in-situ residents do not have a positive perception of authorities and professionals and barely trust decision makers. In a nutshell, such awareness of different stakeholders is one major obstacle of urban renewal, which leads to a deadlock. Without changing the awareness, it is difficult and inefficient to reach agreement among the participated stakeholders.

2.5.5 Policy Implications and Recommendations

Yung and Chan (2011)argue that the success of stakeholder participation lies in identifying the difference in the needs and perceptions among different stakeholders, and balancing the conflicting interests through an appropriate resolution mechanism. Due to the large disparity of expectations among stakeholders, it is of priority for the governments to establish an effective dialogue mechanism to achieve sustainability. According to Brüggemann (2010), good dialogue can benefit information transparency and break the deadlock to enhance common understanding of different stakeholders.

To address the differences and conflicts, government should also facilitate stakeholder participation through developing supportive administrative & legal system. Given that almost all the identified factors have their own value in views of different stakeholders, the system should holistically consider economic, political, environmental, cultural, and social dimension. Cheung and Leung (2007) state that government accountability can enhance the satisfaction of citizens, especially the powerless one. In urban renewal, this can strengthen the responsibility of government sectors as well as consulting parties to increase their willingness to corporate with less-empowered groups.

Furthermore, because of the traditional culture and social institution in China, same stakeholder participation approaches may not yield the same results as its counterparts (Enserink and Koppenjan, 2007). Therefore, urban-renewal-related education and publicity can be a long-term strategy to improve current awareness among the stakeholders to improve their willingness and skill of participation.

2.6 Conclusions

Urban renewal plays an important role in the urbanization to meet the demand of the growing urban population and stimulate the urban development in China. To achieve sustainable urban renewal, the expectations of different stakeholder groups in urban renewal should be well understood. This paper has identified and analyzed the possible expectations of main stakeholder groups: government sectors, consulting parties, the general public, in-situ residents in rehabilitation projects, and in-situ residents in redevelopment projects. Regarding social dimension, except for the general public, all stakeholder groups are eager to strengthen their participation and discourse in the urban renewal process. Maintaining social stability is a core element of public interest defined by the governments but is not well-appreciated by the others. In old neighborhoods, the social network remains good value to the residents, which is, however, underappreciated by decision makers. From the environmental aspect, more attention is paid to the improvement of the living environment. Although public and residents in rehabilitation projects do care about energy conservation, promoting green buildings and energy efficiency retrofitting is not a priority for governments and consultants compared to other factors. From an economic perspective, the government gives top priority to economic growth. Being another key element of public interest, it benefits the public in general, but not the

in-situ residents' concern. The in-situ residents agree that decent compensation or relocation is their top priority. Due to ignorance and misunderstanding, conflicts among stakeholders often emerge during the urban renewal process. Obviously, it is counter to the premise of sustainability. One of the top issues is for the governments to redefine the "public interest" by considering urban development in the macro scope as well as human needs at the micro level. Moreover, establishing an effective dialogue mechanism and supportive administrative and legal system is an efficient way to reduce conflicting views. More education and publicity about urban renewal for various stakeholders can be a long-term strategy to improve the awareness of different stakeholders in China.

This paper explores the stakeholder participation in sustainable urban renewal in China by understanding the expectations of different stakeholder groups. It is the first step to obtain the whole picture of stakeholder participation in urban renewal projects.

For future research, stakeholder analysis methods will be applied to further explore the roles of different stakeholders and their relationships in urban renewal projects in China. Based on this, it is possible to establish a multi-stakeholder model to support participatory urban renewal.

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3 The Role of Stakeholders and Their Participation Network in Decision-Making of Urban Renewal in China

The Case of Chongqing

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ABSTRACT Since the late 1970s, China's fast growth of economy and urbanization have driven large-scale urban renewal projects. To deal with complex urban problems, urban renewal requires integrated, coordinated and multifaceted strategies involving a wide range of stakeholders. A deeper understanding of the stakeholders in the decision-making process is an essential step towards sustainable urban renewal. This paper aims to understand the stakeholders and their participation in the decision-making of urban renewal in China, using the case of Chongqing. Data were collected through in-depth interviews and a questionnaire survey. Stakeholder Analysis and Social Network Analysis were complemented as the research methodology. First, the

stakeholders involved in urban renewal decision-making were clarified. Second, the characteristics, including knowledge, power, and interest of each stakeholder, were analyzed. Third, the relationships between stakeholders were probed, and the structure of their network was examined. Finally, policy implications were drawn to the issues of stakeholder participation in urban renewal decision-making in China.

KEYWORDS urban renewal; decision making; stakeholder analysis; social network analysis; China

3.1 Introduction

Since the reform and opening-up policy in the late 1970s, the economy and urban population have experienced rapid growth in China (Qian, 2010). It has led not only to new construction but also large-scale demolition and reconstruction in the name of urban renewal. Urban renewal, also named urban regeneration, brings improvement in the existing urban areas, which is a sound approach to cope with urban decay and achieve multiple socioeconomic goals (Adams & Hastings, 2001; Couch, 1990; Zheng, et al., 2014). Since the expansion of urban renewal projects, building demolition and reconstruction have climbed to a high level. Between 2011 and 2015, there were at least 460 million m^2 of buildings being demolished in China (Zhang & Zeng, 2016).

As with all multi-dimensional and complex public issues, there is a wide range of stakeholders involved in urban renewal projects. Commonly, the government-led urban renewal decision-making exists in the majority of cities in China (Zhou, et al., 2017). Large-scale urban renewal projects usually trigger a spectrum of social problems in practice, e.g., social injustice and inequality, due to a lack of understanding and recognition of the stakeholders. (Liu, et al., 2012; Zhuang, et al., 2017).

Sustainable urban renewal combines the stimulation of economic activities and environmental improvements with social vitality (Colantonio & Lane, 2007). In the social dimension, sustainability considers two elements: ethical values and norms (e.g., equity and justice) related to the broad engagement of stakeholders (Vallance, et al., 2011). A rational stakeholder participation mechanism is emphasized as a crucial approach to benefit sustainable urban development in many research studies (Couch & Dennemann, 2000; Garcia, 2004; Kaza, 2006).

In urban renewal projects, the decision-making is greatly influenced by the relationship between different stakeholders, the characteristics of partnership, as well as the power structure, mechanism, etc. (Zheng, et al., 2014). In practice, stakeholder systems are recognized as a combination of isolated individuals/organizations, who are not subjected to constant interaction (Caniato, et al., 2014). Nevertheless, it is argued that the stakeholders are mostly interdependent (Brugha & Varvasovszky, 2000; Elias, et al., 2002; Zhuang, et al., 2017). Assessing the systems can help stimulate their involvement and interactions, and thus influence project success (Vance-Borland & Holley, 2011). However, until now, little research has systematically studied the roles of various stakeholders and how they interact with each other when participating in urban renewal decision-making in China. Therefore, an in-depth understanding of various stakeholders in urban renewal decision-making is vital to deal with social problems, thus improving the sustainability of urban renewal in China.

The research study as reported in this paper aims to understand the stakeholders in urban renewal decision-making in China. It answers: who are the stakeholders? What are their characteristics? Moreover, what are the relationships between them? As the representative city in southwest China and an active city in urban renewal projects, Chongqing was selected as the case city in this research. This paper is structured as follows. First, it reviews the stakeholders' participation in urban renewal decision-making in China. Then, it describes the research methodology. Following this, this paper analyzes the stakeholder characteristics and their relationships. Finally, the discussion and conclusions are presented.

3.2 Review of Past Studies in Decision-Making and Stakeholder Participation in Urban Renewal in China

3.2.1 Decision Making of Urban Renewal

Globally, in recent decades urban renewal has played a vital role in improving life quality and will continue bringing significant changes in urban areas in the near future (Chen, et al., 2008; Shen, et al., 2013). It is crucial to meet the needs of

resident stakeholders in more high-quality buildings and neighborhoods in the old urban areas, but sustainably. Many scholars believe that urban renewal makes excellent contributions to economic development, social mix and equality through relocating in-situ residents into new neighborhoods with a decent living conditions and environment (August, 2016; Lelévrier, 2013). However, in many cases, it also brings about unsustainable consequences such as social contradictions, loss of urban culture, etc. (Yau & Chan, 2008). To better tackle urban problems, decision-making of urban renewal has become a hot research topic in global urban studies. In the perspective of decision criteria/methods, Juan, et al. (2010) presents a model for making the optimal decision (rehabilitation or redevelopment) for urban renewal in Taipei City. Wang, et al. (2014) developed a framework of decision-making factors and supporting information to facilitate sustainable land use planning in urban renewal projects. Regarding collaborative decision-making, Mayer, et al. (2005) combine the decision-support tool and simulation game to support the collaboration of different stakeholders in the decision-making of urban renewal. Maginn (2007) explores the broad strategic potential of applied ethnography and collaborative planning theory in realizing more effective stakeholder participation and the decision-making processes in urban renewal projects.

Although many academic and practical works have been done on this issue, such efforts cannot always achieve the positive goals since it is not easy to reduce social inequality and cleavages by addressing to all needs from the wide range of stakeholders in different contexts (Dempsey, et al., 2011; Hemphill, et al., 2004; Pendlebury, et al., 2004). In Western countries, such as the UK and the Netherlands, even collaborative governance is built among governmental sectors, consultants, affected residents, and developers, etc., the different discourse power and sense of inequality are always the top causes of conflicts between stakeholders (Dodson, 2006). Compared with the western counterparts, in China the strong power of government in urban renewal makes this situation of conflict even more apparent and outstanding (Li, et al., 2017). To deal with the issues, the priority is to understand each of the stakeholders in the specific context.

3.2.2 Stakeholder Participation in Urban Renewal Decision-Making in China

In China, government intervention exists in economic development and public policy delivery. It cooperates with market power to achieve capital accumulation through land reuse such as urban renewal under the joint effects of socialist histories and current global trends (Li, et al., 2017). Although it has brought about many

desirable achievements, many problems such as gentrification, social inequality, and loss of culture, etc., are apparent (Suo, et al., 2015). Chinese governments have developed a number of participatory and deliberative institutions, such as public hearings and consultative meetings, to promote stakeholder participation in public projects and maintain social stability (Enserink & Koppenjan, 2007). In 2013, a national reform policy "*The Decision on Major Issues Concerning Comprehensively Deepening Reforms*" was released (CD, 2013). It required the government to shift its role by building itself into a service-oriented government and delegate its power to other participants in public issues. However, there is no one-fits-all approach to stakeholder participation in urban renewal decision-making. To optimize stakeholder participation, it is still a challenge due to the unique institutions and social culture in China (Li, Ng, et al., 2012b; Yi, et al., 2017).

The success of public projects is based on the recognition of participant interdependence (De Bruijn & Ten Heuvelhof, 2010). Only the joint efforts of various stakeholders and the exchange of information, resources, and targets can result in the realization of sustainable urban development (Enserink & Koppenjan, 2007). Such an approach is considered as necessary to reach a consensus and so it is widely applied in the western world. Learning from this idea, it calls for a good participative institution based on the in-depth understanding of diverse stakeholders in the complex socio-economic system in China (Tang, et al., 2008; Zhuang, et al., 2017).

Stakeholders refer to "any group or individual who can affect, or is affected by, the achievement of the organization's objectives." (Freeman, 2010; Li, Ng, et al., 2012a; Petts & Leach, 2000). Based on this definition, precisely, stakeholders in urban renewal decision-making are those who participate in the decision-making process or influence the decision-making, whose interests are positively or negatively affected by the decision results.

In China, decision-making of urban renewal is not just a 'single-decision.' It should consider types of projects, site selection, renewal mode, timing, and macro urban development, social risk, etc. through a complex process. Therefore, there are different stakeholder groups involved in the decision-making. In many cases, the government retains the strong power on urban governance through the dominant control of policy release, resource allocation, and service delivery, etc. (He & Wu, 2005). The public here refers to the general public and the affected residents. In earlier times, they have often been excluded from the decision-making process (Hui, et al., 2008). In addition, the developers also play a vital role in the implementation of urban renewal projects, but it has been criticized that the market power also affects the decision-making in some instances (Li, et al., 2017). The third parties,

such as consulting parties, NGOs, financial institutions, etc., also provide valuable support in decision-making, but they are barely discussed in the relevant studies (Liao, 2013).

Stakeholder characteristics and their relationships are seen as key factors of policy and management system (Bryson, et al., 2011). Regarding stakeholder characteristics, power and interest are two essential elements to categorize the stakeholders (Grimble & Wellard, 1997; Schmeer, 1999). The former refers to the extent a stakeholder can influence the decision; the latter means the concerns/expectations of a stakeholder, and the level at which one is affected by the decision. As government-led projects combined with market power and have high impact on the public, the types of stakeholder interest of urban renewal decision-making in China can be categorized as "administration & politics", "marketing performance", "community benefits", or a combination of the above two or three (Liu, 2006; Qian, 2009). Although governmental sectors have diverse functions and objectives, they all adopt regulation, policy and law enforcement to comprehensively benefit the urban development and social stability (Zhuang, et al., 2017). This type of interest can be summarized as "Administration & politics". "Marketing performance" refers to the economic benefits that some private sectors want to maximize. "Community benefits" means various civil society concerns about the affected communities, such as community environment, living comfort, equity, and justice, etc. (Qian, 2009). Moreover, the stakeholders' knowledge about urban renewal decision-making, and the sectors they belong to, also have a strong influence on their perception and what they can contribute to the projects (Yau & Chan, 2008).

3.3 Methodology

3.3.1 Combination of Stakeholder Analysis and Social Network Analysis

The growing recognition of key stakeholder roles to the success of the policy, project, business, etc., leads to the increasing popularity of Stakeholder Analysis in different fields (Brugha & Varvasovszky, 2000; Elias, et al., 2002; Prell, et al., 2009). Stakeholder Analysis is widely used in analyzing and supporting multi-

actor project management, participatory decision making, and other cooperative activities (Lienert, et al., 2013; Scholes, 1998). It is a method to analyze stakeholder characteristics through identifying the stakeholders and understanding their power, interests, attitudes, etc., in the system (Brugha & Varvasovszky, 2000; Mushove & Vogel, 2005).

Although Stakeholder Analysis has been broadly applied, it has received some criticism about its academic rigor and quality in practice, especially when utilized for a large group of stakeholders (Prell, et al., 2009; Reed, et al., 2009). Therefore, quantitative methods are sometimes added for the purposes of data triangulation (Lienert, et al., 2013; Prell, et al., 2009). Today, more attention has been given to the social network which influences the attitudes and behavior of different stakeholders (Scott, 2017; Wasserman & Faust, 1994).

Social Network Analysis (SNA) focuses on "identifying and comparing the relationships within and between individuals, groups, and systems in order to model the real-world interactions" (Burt, et al., 1983; Otte & Rousseau, 2002; Ramalingam, 2006). It has been adopted in several broad research areas, including project management, collaborative governance, organizational study, supply chain, etc. (Badi, et al., 2017; De Nooy, 2003; Lee & Kim, 2011; Wey, et al., 2008). However, this approach also has some drawbacks. As described by Freeman (2004), Social Network Analysis depends heavily on graphic representation and relies on the use of mathematical and computational models. It can systematically indicate the existence of an interactive relationship but does not illustrate what is behind the situation, such as the key causal influences.

Stakeholder Analysis stands in a broad view concerning stakeholder characteristics, and Social Network Analysis can systematically explore the formal and informal relationships between the stakeholders. In many research studies, the two analytical methods are combined to explore the stakeholder systems, since the one can address the question that the other cannot answer in depth (Caniato, et al., 2014; Lienert, et al., 2013; Prell, et al., 2009). In this research, the complementary support of both methods is newly adopted in urban studies in the Chinese context. It helps to move beyond a mere description of the formal institutional arrangement and gain deeper insights into the dynamics underlying the stakeholder structure in urban renewal decision-making.

In this research, the mixed methods of Stakeholder Analysis and Social Network Analysis, with quantitative and qualitative data were processed into triangulation analysis to enrich the holistic understanding of the results, which are explained in our discussions. As shown in Figure 3.1, this research covers the following four major steps. Step 1, to make an inventory of the stakeholders involved through a literature review and interviews; Step 2: to characterize and categorize the identified

stakeholders based on stakeholder characteristics, including power level, interest level, knowledge level, type of interests, type of sectors, etc., using Stakeholder Analysis (data source: interview and questionnaire survey); Step 3: to explore the interdependencies between different stakeholders and stakeholder groups, using Social Network Analysis (data source: questionnaire survey); and Step 4 to discuss the key findings and synthesise/propose policy implications.

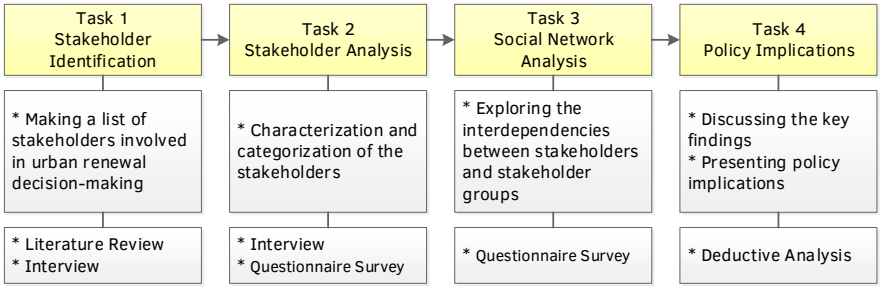

FIG. 3.1 Research Process

For the Stakeholder Analysis part, a ***power*** versus ***interest*** grid was introduced as a stakeholder evaluation tool for mapping and comparing the power and interest level of all stakeholders (Bryson, et al., 2011; Patton, 2008). For the Social Network Analysis part, network diagrams were utilized to map out the stakeholder interactions. Moreover, based on the interaction among different stakeholders, Degree Centrality, Closeness Centrality (Eigenvector), and Betweenness Centrality were adopted to analyze the network characteristics. Degree Centrality represents the level of interconnection by measuring the number of ties that a stakeholder has with other ones. (Rongerude & Christianson, 2014). The high value of degree centrality means that a stakeholder is more likely to have access to information and to influence the decision-making. However, the interconnection does not mean the stakeholder can reach many other stakeholders in the whole network. To describe the connectedness of one stakeholder in the network, the Closeness Centrality (Eigenvector) was applied. It can measure the degree of connection to other relevant stakeholders concerning overall network structure (Lucio & De la Cruz, 2012). Betweenness Centrality is based on the number of shortest paths passing through the stakeholder. The stakeholder with higher scores can play the role of 'middleman' that provides shorter pathways of interaction between two other stakeholders (Otte & Rousseau, 2002). It is also a measurement of the amount of control that a stakeholder can exert within the network.

3.3.2 Study Area

Chongqing, one of five municipalities directly under the Central Government, was selected as the case study. It is the core and largest city in southwest China. The urban development features of Chongqing are considered as a typical sample in China (Zhou, et al., 2017). Due to the policy issued by the Chongqing Municipal Government in 2008, urban renewal projects were considered as one of the key urban development strategies (Liu, et al., 2012). There was 336.49 ha area of residential buildings demolished through large-scale urban renewal from 2010 to 2014 (CSB, 2016). Characterised by the massive redevelopment of buildings and neighborhoods, Chongqing provides plenty of cases and resources for researching urban renewal.

As the capital of Chongqing, Yuzhong District has played a significant role in the history of Chongqing's urban development. In 2016, there were 11 urban renewal projects in the area of 232402 m^2 being planned and implemented in Yuzhong District, affecting 3612 households. It represents one of the hotspots of urban renewal comparing with other districts in Chongqing. Thus, Yuzhong District is selected as the representative district in Chongqing for data collection.

Two methods of data collection were applied in Yuzhong District, Chongqing: semi-structured interviews and a questionnaire survey, which were conducted between July and November 2016. The data collection focused on the projects in the residential area, which represent most of the urban renewal projects. At the time of the data collection, most of the targeted buildings/neighborhoods were built in the 1970s to 1990s, and many of the affected residents were vulnerable groups.

3.3.3 Interviews

Semi-structured interviews were conducted to verify the stakeholder list made by scholarly authors and collect the data for the analysis. In the preliminary list of authors, there were 28 stakeholders in urban renewal decision-making being identified. The targeted interviewees were selected based on the following principle: (1) They represent one of the preliminarily listed stakeholders; (2) They have experience in participating in urban renewal decision-making. Since it is difficult to interview every stakeholder respectively (especially government sectors), finally, there were 23 individuals representing most of the listed stakeholders in 8 stakeholder groups being reached. The representatives include government officials, professors, real estate managers, and citizens, etc., who have gained rich practical experience and sufficient knowledge in urban renewal in Chongqing. Table 3.1 below shows the profiles of the interviewees.

TABLE 3.1 Groups and Background of the Interviewees.

Group	ID	Role/Position	The function of Department and Qualification
Municipal Government	I1-M	Government Officer	Working in Commission of Development and Reform; Urban development specialist
	I2-M	Government Officer	Working in Bureau of Urban Planning; Urban planning specialist, more than 25 years' working experience
	I3-M	Government Officer	Working in Administration of Land, Resources, and Housing; Over 10 years' experience in land management in urban renewal projects
	I4-M	Government Officer	Working in Commission of Urban-Rural Development; Over 15 years' experience in urban renewal projects (shanty town)
District Government	I5-D	Government Officer	Working in the Bureau of Land and Resources; land use planning and land management specialist
	I6-D	Vice Director	Working in Bureau of Housing Management; Over 20 years' working experience in land expropriation
	I7-D	Vice Director	Working in the Bureau of Urban Planning; Urban planning specialist
	I8-D	Vice Director	Working in Commission of Development and Reform; Urban development specialist, 10 years' experience in urban development planning
Local Administrative Organization	I9-LA	Director	Working in Sub-District Administrative Office; specialist of grass-roots work in urban renewal projects
	I10-LA	Director	Working in Neighborhood Committee; specialist of grass-roots work in urban renewal projects
Consulting Party	I11-C	Professor	Working in a university; Over 15 years' research and practical experience in urban renewal projects
	I12-C	Researcher	Working in a university; professionals of urban renewal
	I13-C	Researcher	Working in a university; professionals of urban renewal and urban planning
	I14-C	Professor	Working in a university; Over 10 years' research and practical experience in urban renewal
	I15-C	Director	Working in a planning and design institute, professionals of urban planning and renewal
Land-Related Organization	I16-LR	Manager	Working in Regional Platform Company; Over 15 years' practical experience in land management in urban renewal projects
Developer	I17-RE	Manager	Working in a private real estate company; Over 10 years' practical experience in real estate development
	I18-RE	Manager	Working in a private real estate company; Over 15 years' practical experience in real estate development
Financial Institution	I19-F	Officer	Working in China Development Bank; Specialist of feasibility studies of urban renewal projects
Public	I20-P	Citizen	A resident of a neighborhood that will be renewed
	I21-P	Citizen	A resident of a neighborhood that will be renewed
	I22-P	Citizen	General public
	I23-P	Citizen	General public

During the interview, the interviewees were asked: (1) to verify the preliminary stakeholder list; (2) to clarify the stakeholder roles they represent; (3) to summarize the interest of the represented stakeholder and other stakeholders they had contacted or were familiar with, in terms of administration & politics, marketing performance, community benefits, combination; (4) to illustrate the cooperation and conflict between them and other stakeholders; and (5) to answer a series of open-ended questions about the current problems or barriers related to urban renewal decision-making.

The prelimnary stakeholder list was adjusted and completed thanks to the help of the professionals from the interviews. After the interview, the list was finalized by adding 8 more stakeholders, including 2 municipal governmental sectors (Bureau of Letters and Calls in Municipal Government and Bureau of Supervision), 4 district governmental sectors (Bureau of Letters and Calls, Bureau of Civil Affairs, Bureau of Business, and Bureau of Supervision), and 2 land-related organizations (District Land Regulation and Reserve Center and Land and Housing Ownership Registration Center). Therefore, there are finally 36 stakeholders being identified in urban renewal decision-making. The verified stakeholder list is shown in Table 3.2 below.

3.3.4 Questionnaire Survey

The questionnaire survey was designed and addressed to the verified list of 36 stakeholders (Table 3.2). The respondents were selected based on the following principle: (1) They represent one of the listed 36 stakeholders; (2) They have experience in participating in urban renewal decision-making. The questionnaires were purposely distributed to all of the listed stakeholders via personal delivery and e-mail. Finally, a total of 46 valid questionnaires covering all the listed 36 stakeholders were collected. The questionnaire comprised two parts. The first part was designed to understand the knowledge, power and interest-level concerning urban renewal decision-making, in the perspectives of the selected stakeholders. The data was measured by a five-point Likert scale (0, 2.5, 5, 7.5, and 10), where 0 represents no or minimum knowledge/power/interest, and 10 means very high level. In the second part, the respondents were asked to indicate all the other organizations/individuals with whom they interact within urban renewal decision-making.

For data analysis, the knowledge, power and interest levels were divided into five groups measured on the mean score X: no or minimum ($X=0$), very low ($0<X\leq2.5$), low ($2.5<X\leq5$), high ($5<X\leq7.5$), and very high ($7.5<X\leq10$). Since these factors were

self-reported, the values were triangulated to check the general consistency by the interviewees. If inconsistency emerged, the respondents would be contacted again to verify the answer. Discursive questions (e.g., describing the roles and duties) would be asked to confirm the correctness of the value if the respondent insisted on his/her own opinions. The scores about those characteristics given by the respondents were mostly consistent with interviewee opinions. Furthermore, the interactive relationships between different stakeholders were analyzed in UCINET (Borgatti, et al., 2002). Adopting UCINET, interactive networks were generated to map out the connectivity of stakeholders, and the parameters of Degree Centrality, Closeness Centrality (Eigenvector), and Betweenness Centrality were calculated to describe the network characteristics.

3.4 Results

3.4.1 Identifying Stakeholders

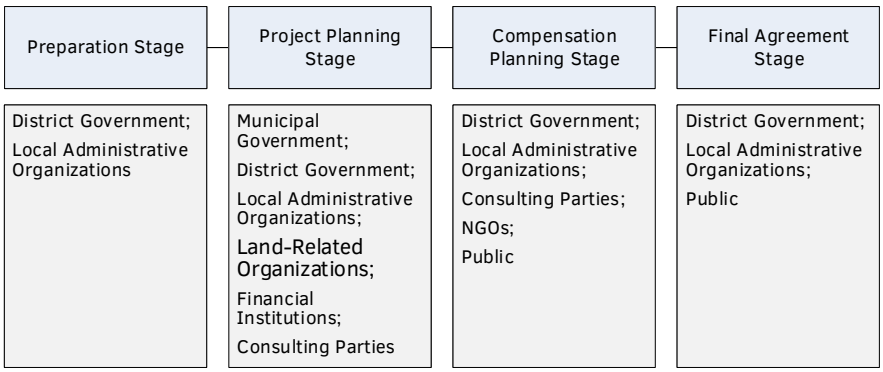

FIG. 3.2 Simplified urban renewal decision-making process and stakeholder groups in Chongqing, China (by Authors).

TOC

To compile a list the stakeholders in urban renewal decision-making, a priority is to clarify the scope of the decision-making process. Based on the authors' knowledge and practical experience, the list is shown in Figure 3.2. In addition, the overall process can be simplified and presented as 7 steps involving 8 stakeholder groups (sectors).

Then, according to the in-depth interviews, as many as 36 stakeholders in 8 sectors mentioned above were finally identified in the urban renewal decision-making process. The list of stakeholders is summarized in Table 3.2.

TABLE 3.2 Stakeholders and Their Sectors in urban renewal decision-making in Chongqing, China

Sector	Stakeholder	
Municipal Government	M1. Bureau of Urban Planning	M2. Administration of Land, Resources, and Housing
	M3. Commission of Urban-Rural Development	M4. Commission of Development and Reform
	M5. Bureau of Finance	M6. Bureau of Letters and Calls*
	M7. Bureau of Supervision*	M8. Other Special Departments
District Government	D1. Bureau of Urban Planning	D2. Bureau of Land and Resources
	D3. Bureau of Housing Management	D4. Commission of Construction and Transportation
	D5. Commission of Development and Reform	D6. Bureau of Letters and Calls*
	D7. Bureau of Municipal Administration and Landscape	D8. Bureau of Finance
	D9. Bureau of Civil Affairs*	D10. Bureau of Business*
	D11. Office of Legislative Affairs	D12. Bureau of Supervision *
	D13. Other Specific Departments	
Local Administrative Organization	LA1. Sub-district Administrative Office	LA2. Neighborhood Committee
Land-Related Organization	LR1. Regional Platform Company	LR2. District Land Regulation and Reserve Center*
	LR3. Land and Housing Ownership Registration Center*	
Developer	RE1. Real Estate Developer	
Financial Institution	F1. China Development Bank	
Consulting Party	C1. Planning/Design Agency	C2. Scholar
	C3. Real Estate Appraisal Agency	C4. Building Safety Appraisement Agency;
NGO	N1. Community NGO	N2. Non-Community NGO
Public	P1. Affected Resident	P2. General Public

Note: "" means that the stakeholder is added to the list based on the interviews*

In urban renewal decision-making, the municipal government does not take the responsibility to initiate urban renewal projects. Instead, the role of relevant government sectors is mainly to guide the work of district government, to oversee and evaluate the process, and to approve the final decision, etc.. District government is lower than municipal government and mostly responsible for the decision and involves in the main decision-making process. More than ten district governmental sectors with the function of planning, construction, land, housing, development, finance, etc., cooperatively make use of their power. The local administrative organization is the 'grassroots-level' government, which consists of two sub-levels (Sub-district Administrative Office and Neighborhood Committee). They both do the groundwork such as residents' investigation, coordination, policy advocacy, etc., to support urban renewal decision-making. The land-related organization is state-owned and serves as a platform for land development issues. Financial Institution only includes one stakeholder (China Development Bank). Apart from the finance of local administration, the loans from China Development Bank are the common financial source of urban renewal projects. Consulting parties are the key professionals, whose opinions are a vital basis for government decision-making about urban renewal.

3.4.2 Analysis of Stakeholder Characteristics

The level of power and interest in urban renewal decision-making is shown in power vs. interest grids in Figure 3.3, grouped according to the sector, knowledge level, and type of interest. The figure drawn from the questionnaire survey data, is based on the mean score of each parameter for the identified 36 stakeholders. Then, taking mean score "5" of power and interest levels as the threshold, all the stakeholders can be divided into the following four categories: players, subjects, context setters and crowd (Patton, 2008). ***Players*** have a strong discourse power on decision-making, and their interests are also strongly affected by the outcomes. ***Subjects***' interests can be strongly affected by the outcomes, but they have relatively small power in making decisions. Conversely, the ***context setters*** have strong discourse power, but little direct interest which can be affected by the decision. The ***crowd*** cannot exert much influence on decision-making and are also not strongly affected by the outcomes.

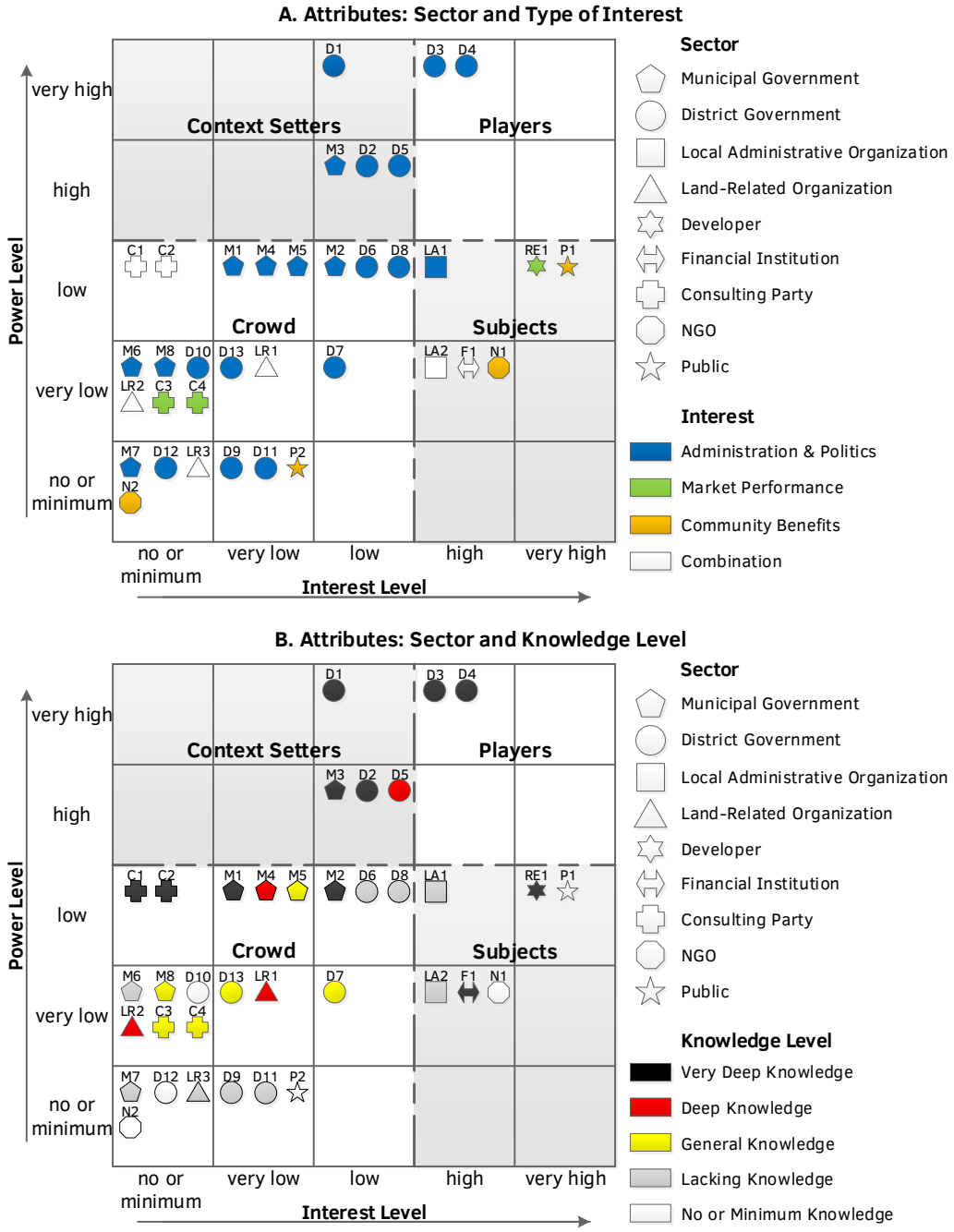

FIG. 3.3 Power vs. Interest Grid, grouped according to (A) Sectors and Type of Interest, (B) Sectors and Knowledge Level

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Figure 3.3 shows 22 stakeholders taking "administration & politics" as their primary interest, including all players and context setters. Both players and three out of four context setters are from district government. It indicates that the district government has a higher power in the decision-making process. As the players, Bureau of Housing Management (D3) and Commission of Construction and Transportation (D4) are the principal actors. As the context setters, Bureau of Urban Planning (D1), Bureau of Land and Resources (D2), and Commission of Development and Reform (D5) are another critical district governmental sector. These key district governmental sectors are cooperatively making vital contributions to the decision-making of urban renewal in housing, construction, urban planning, land use management, and urban development, respectively. These sectors exert much influence on decision-making in various aspects. However, because of the current government accountability mechanism, many of them do not hold sufficient responsibility for the unintended outcomes (interviewee I6-D and I8-D). The Commission of Urban-Rural Development (M3) is the only context setter belonging to the municipal government, which makes urban construction policy and coordinates other sectors in the municipal level. Since municipal government mainly plays the role of guider and approver, its influence on urban renewal decision-making is relatively low compared to that of district government.

Subjects comprise six stakeholders from five sectors. The discourse power of local administrative organizations is relatively weak (interviewee I9-LA and I10-LA). As the grass-roots authorities, Sub-district Administrative Office (LA1) and Neighborhood Committee (LA2) make much effort to deliver information and coordinate the conflicts between the public and the other stakeholders. They can hardly influence the major decision-making of urban renewal, but bear the consequences if the affected residents complain or protest about the policy or decision. In addition, local administrative organizations do have a few experts (planning, land policy, etc.) to support the groundwork. There are no specific regulatory documents or policies precisely on the functions of each sector in urban renewal projects. Therefore, the relevant government sectors are not willing to be involved because it is not considered as their obligation. As stated by the interviewee from the sub-district administrative office (interviewee I9-LA), *"It leads our job to being inefficient and ineffective, and poses huge conflicts especially when doing policy advocacy and collecting opinions of the affected residents."* Real estate developers (RE1) contribute to urban renewal through investing in the urban land. They are profit-oriented, whose interests and objectives are to maximize their profit through land development. Their investment strategy in urban renewal projects highly depends on the information from the governments. However, due to the developers holding massive resources, in many instances, they also have some discourse power that both formally and informally influence the decision-making process (interviewee I7-D

and I17-RE). Affected residents (P1) and community NGOs (N1) are rooted in the neighborhood. As the in-situ stakeholders, they both experience the impact of urban renewal projects, so their primary interest is to protect community benefits. However, they are rarely offered opportunities to be involved in the project (interviewee I6-D, I11-C, and I13-C). Since they must move out of the place, all they care is to gain enough information and participate in the decision-making process to maximize their compensation or get an ideal relocation (interviewee I10-LA, I11-C, I20-P, and I21-P).

Surprisingly, consulting parties, especially planning/design agencies (C1) and scholars (C2), have the expertise in urban renewal decision-making, but all of them are grouped in the 'crowd'. Their professional services should be essential references for decision-making. Nevertheless, the results show that their influence on decision-making is limited. In many instances, their suggestions are not what the government expected (interviewee I11-C, I13-C, I14-C, and I15-C). In practice, consultants often adopt the stance of the governments and use their expertise to demonstrate the rationality of government needs. Moreover, because of the lack of rational accountability, consultants are not accountable for their work (interviewee I14-C and I15-C).

3.4.3 Network Structure

The Interaction Network between different stakeholders is shown in Figure 3.4, grouped according to the sector, knowledge level, and type of interest. Based on the data from the questionnaire survey, the stakeholders' integration in the decision-making process can be analyzed in a network perspective via their connectivity. Figure 3.4 shows no single stakeholder standing out as the dominant center in the network, and only a small number of stakeholders have fewer than four connections. Non-Community NGOs (N2) and General Public (P2) are the only exceptions disconnected to others. N2 is barely involved in most cases, due to the lack of formal participation channels and a shortage of expertise to make contributions. P2 also engage in urban renewal projects through the internet, mass media, etc., mainly through public supervision with almost no direct interaction with other stakeholders.

In Figure 3.4, the results show that stakeholders from the district or municipal governments tend to be involved in more interactions. In Chongqing, there is no designated department in full charge of urban renewal decision-making. Instead, the main relevant function is separated into several sectors. In municipal and district government, there are around 21 sectors, directly and indirectly, involved in the

decision-making process. In practice, the division of rights and obligations causes potential problems such as overlap of functions, objective deviation, unnecessarily long decision-making time, complex approval process, and buck-passing, etc., (interviewee I4-M, I6-D, I12-C, and I13-C).

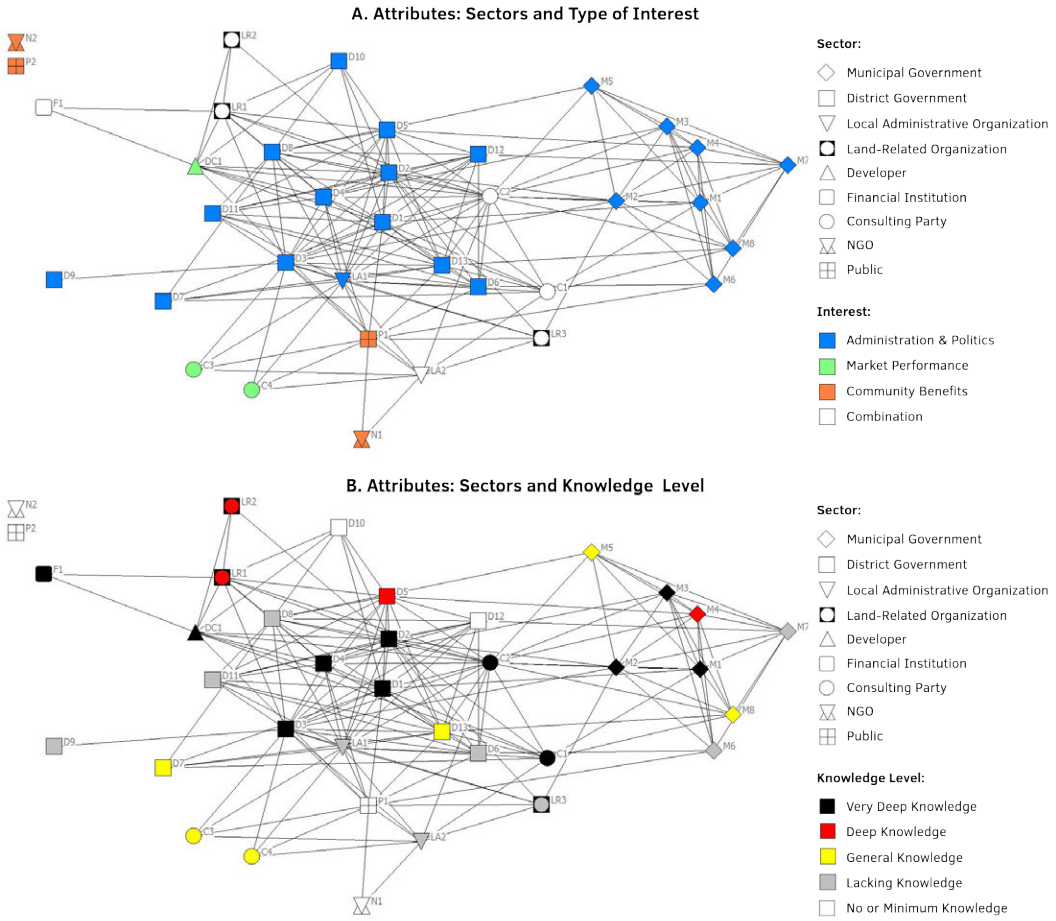

FIG. 3.4 Interaction Network, grouped according to (A) Sector and Type of Interest, (B) Sector and Knowledge Level

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The network structure is also described by the degree, closeness and betweenness centrality of each stakeholder and summarized with rankings in Table 3.3. The results demonstrate that there is no single stakeholder that can fully control the network, since the scores of top five ranked in degree, and closeness centrality is relatively close. According to the centrality measures, the Bureau of Housing Management (D3) ranks the first in all three types of centrality, which can be recognized as the key stakeholder. Similarly, the Bureau of Urban Planning (D1), Bureau of Land and Resources (D2), and Commission of Construction and Transportation (D4) are also crucial stakeholders for their high rankings. They play the core roles both in district government and the entire network. Outside of the district government, Scholars (C2) and Sub-District Administrative Office (LA1) are also identified as the core roles, ranking within the top five in all three centralities. In China, C2 scholars not only focus on academic research but also act as independent consultants for many public projects. Although C2 and LA1 are reported as having limited power in urban renewal decision-making, their connectedness reflects their importance in the entire network. They both play essential roles and have many connections with others.

In addition, Real Estate Developer (RE1), Regional Platform Company (LR1) and Affected Residents (P1) rank high in betweenness, but low in degree and closeness centrality. It means that they are not the core roles but, in reality, control the flow of information among many other ones in the network. The information, resources, and demands of RE1 are essential for the success of the projects. Formally, RE1 is not allowed to interfere the urban renewal in the decision-making process. Nonetheless, it is common that developers make a deal with governmental sectors before the final decision is to be made (interviewee I7-D, I12-C, I14-C, I17-RE, and I18-RE).

In many cases, the potential renewal projects are located in a relatively low-investment-value area that is far from the city center. Land expropriation and building demolition account for the significant cost of renewal projects. If governments provide substantial financial support to the primary land development, once there is no developer bid for land development, it will become a huge financial loss. Thus, to promote urban renewal projects in those areas, district governments tend to attract investment before making the decision and guarantee there is at least one developer who will bid for it. Nevertheless, as the profit-oriented sector, to maximize the value of the investment, the developers may ask different governmental sectors for special policy support, or may even change the current plan. LR1 connects financial institutions, private sectors and the government in land development issues. It holds and transfers much essential information to relevant stakeholders. The living conditions and willingness of P1 are one of the top considerations of decision-makers, so there are also many information exchanges between them and other stakeholders.

TABLE 3.3 The Centrality Measures of Stakeholders

Code	Degree Centrality		Closeness Centrality		Betweenness Centrality	
	Degree	Rank	Eigenvector	Rank	Betweenness	Rank
D3	19.000	1	0.289	1	70.485	1
C2	19.000	1	0.283	5	58.272	2
D2	18.000	3	0.289	1	39.557	4
LA1	18.000	3	0.285	3	33.383	5
D1	17.000	5	0.285	3	26.394	7
D4	15.000	6	0.268	6	16.604	11
D5	13.000	7	0.238	7	12.392	15
D13	13.000	7	0.233	8	12.967	13
D8	13.000	7	0.227	9	16.789	10
P1	13.000	7	0.175	13	43.747	3
D12	11.000	11	0.209	10	10.404	16
M2	11.000	11	0.129	17	20.103	9
D11	10.000	13	0.204	11	0.498	26
D6	10.000	13	0.191	12	6.681	19
C1	10.000	13	0.158	14	12.836	14
LR1	10.000	13	0.156	15	21.829	8
RE1	10.000	13	0.146	16	26.940	6
M1	10.000	13	0.111	19	8.292	18
LA2	9.000	19	0.118	18	16.358	12
M3	9.000	19	0.098	22	4.154	22
M4	9.000	19	0.096	23	5.071	20
M8	8.000	22	0.096	23	4.304	21
M7	8.000	22	0.072	27	4.022	23
M5	7.000	24	0.082	26	2.959	24
M6	7.000	24	0.071	28	9.150	17
D10	6.000	26	0.109	20	0.458	27
LR3	6.000	26	0.104	21	2.051	25
D7	5.000	28	0.096	23	0.300	28
C3	4.000	29	0.070	29	0.000	29
C4	4.000	29	0.070	29	0.000	29
LR2	3.000	31	0.048	31	0.000	29

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TABLE 3.3 The Centrality Measures of Stakeholders

Code	Degree Centrality		Closeness Centrality		Betweenness Centrality	
	Degree	Rank	Eigenvector	Rank	Betweenness	Rank
F1	2.000	32	0.024	32	0.000	29
N1	2.000	32	0.024	32	0.000	29
D9	1.000	34	0.023	34	0.000	29
N2	0.000	35	0.000	35	0.000	29
P2	0.000	35	0.000	35	0.000	29

Note: D1 = Bureau of Urban Planning, D2 = Bureau of Land and Resources, D3 = Bureau of Housing Management, D4 = Commission of Construction and Transportation, LA1 = Sub-District Administrative Office, C2 = Scholars, LR1 = Regional Platform Company, RE1 = Real Estate Developer, P1 = Affected Residents

3.4.4 Network Characteristics by Different Groups

TABLE 3.4 Group Centrality Measures

Category	Group	Degree	Closeness (Eigenvector)	Betweenness
Type of Sector	Municipal Government	8.625	0.094	7.257
	District Government	11.615	0.205	16.425
	Local Administrative Organizations	13.500	0.202	24.871
	Land-Related Organizations	6.333	0.103	7.960
	Developers	10.000	0.146	26.940
	Financial Institutions	2.000	0.024	0.000
	Consulting Parties	9.250	0.145	17.777
	NGOs	1.000	0.012	0.000
	Public	6.500	0.088	21.874
Type of Interest	Administration & Politics	10.818	0.168	13.862
	Market performance	6.000	0.095	8.980
	Community Benefits	3.750	0.050	10.937
	Combination	9.500	0.145	18.558
Knowledge Level	Very Deep Knowledge	12.000	0.179	23.636
	Deep Knowledge	8.750	0.135	9.823
	General Knowledge	6.833	0.108	3.422
	Lacking Knowledge	9.111	0.144	9.881
	No or Minimum Knowledge	5.333	0.086	9.102

To better understand the relationships within the network of urban renewal decision-making as the whole, group centralities are applied to describe the network characteristics in different stakeholder groups. As it is shown in Table 3.4, three types of centrality measures are aggregated by type of sector, type of interest and knowledge level.

Regarding sector types, district government, local administrative organizations are well connected in the network. Consulting parties, developers, and the public can likewise be recognized as “brokers” of information. Municipal government also has a good connection in terms of degree centrality. However, although it is in the top administrative level in the network, it is relatively peripheral to its low closeness centrality and does not show importance in the information delivering for its low score of betweenness centrality. Municipal government should approve many relevant plans or documents. However, the long duration of the approval process and complex interaction between sectors may affect the efficiency of the decision-making process (interviewee I3-M, I4-M, and I6-D).

In the perspective of interest type, not surprisingly, the results show that administration & politics dominates the interaction network, scoring the highest closeness and betweenness centrality. In contrast, market performance and community benefits are rather peripheral in the network. Although the purpose of urban renewal is to benefit the public (interviewee I2-M, I3-M, I4-M, I5-D, I6-D, I7-D, and I8-D), as part of the public, the stakeholders representing community benefits do not play a central role at all. Furthermore, the data also denote that the combined interest is of great significance in the network. The actors in this group are all the third parties either led by the government or even state-owned.

Considering knowledge level, it is clear that the stakeholders who have profound knowledge about urban renewal decision-making stand in the central positions in the entire network. This group ranks the first in all three types of centrality measures, which means that it has strong control of the interaction and information flow. However, knowledge level is not polarized between the groups which play vital roles, and which are slightly involved. The group with lacking knowledge rank the second in all three measures. One with no or minimum knowledge also has a high value of betweenness centrality. It refers that these stakeholders with low knowledge level are also essential components of the network which partly control the interaction and information.

3.5 Discussion

3.5.1 Stakeholder Participation in the View of Stakeholder Analysis and Social Network Analysis

This study demonstrates that stakeholder analysis and social network analysis are clearly complementary. The combination of these two methods provides an insight into the stakeholder participation in urban renewal decision-making. Stakeholder analysis is a state-of-the-art tool in non-technical assessment procedures (Caniato, et al., 2014). It reveals the structure of knowledge, power, and interest of stakeholders in decision-making, by considering the already-acknowledged stakeholders as well as the informally involved ones. In this research study, the stakeholder analysis shows the dominant discourse power of "Administration & Politics", especially the district government. In addition, scholars always act as independent consultants in urban renewal projects in China. However, being the stakeholders with "Very Deep Knowledge", it is perhaps surprising to find that consulting parties cannot exert much influence on decision-making, and also are not strongly affected by the outcomes. This finding is contrary to the findings of many earlier studies about public projects and policies, since their consulting services are the important basis of the decision (Lee & Chan, 2008; Skaburskis, 2008). Furthermore, although real estate developers cannot formally be involved in the decision-making process, they can nevertheless still exert their influence through informal relationships with governmental sectors.

In this research study, social network analysis also consolidates some findings from stakeholder analysis, but also provides additional findings through the quantitative and graphic perspectives. As the grass-roots government, although local administrative organizations are powerless in decision-making, they share lots of connections with other stakeholders. It means they play an important role through cooperation and coordination during the decision-making process. Municipal government sectors are in the top decision level, but they are quite peripheral in the network: the systemic collaborations between them and the other stakeholders are not strong. Moreover, it is apparent that the affected residents are strongly affected by the outcomes, yet do not hold much power in the decision-making. However, this does not mean they are marginalized in the network. The connections they hold indicate that the affected residents can indirectly influence the decision-making at a fundamental level. Through social network analysis, the heterogeneous and complex

interaction network is more fully exposed to scrutiny and their significance is better understood. The heterogeneity and complexity results in mutual communications, cooperation, and information exchanges. As it is stated by Sandström and Carlsson (2008), the high level of interaction can facilitate communication, prevent conflicts, and promote joint-action especially when there exist many connections between diverse types of stakeholders. However, it can also lead to the dissatisfaction of many stakeholders. It may reduce the possibility of the action of the key stakeholders since they have to satisfy many participants (Bodin & Crona, 2009).

The integrated use of stakeholder analysis and social network analysis has resulted in added benefits, in particular by providing a deeper understanding of the urban renewal decision-making in China. The results not only give a holistic picture of the system but also assess the problems of stakeholder participation in detail. Based on this, it is evident that the combination of these two analyses provides better implications on the way to solve the problems and improve the system.

3.5.2 The Complexity of Government Sectors

As the results show, the complex interaction is apparent between governmental stakeholders. In China, although governments hold strong power in decision-making, there are many governmental sectors in different administrative levels involving in local urban renewal projects. Nevertheless, their functions and responsibilities are not well-defined when cooperating in the decision-making process. Because of these, although some government sectors can strongly influence the decision-making in planning, housing, urban land, development, etc. separately, none of them can be fully responsible for the success of projects, and no one has the power to hold all the cards. The lengthy time for project application, investigation, evaluation, making relevant plans, reaching agreements, etc., is both costly, and carries risk, and also creates difficulties and low-efficiency for cooperating with other stakeholders. Not surprisingly, according to Huxham, et al. (2000), 'tangles of ties' may also lead to 'partnership fatigue', reduce transparency and accountability, and limit the contacts with outsiders.

If we wish to draw comparisons to this mainland China study, by taking two Asian counterparts, Hong Kong and Singapore as examples, most issues relevant to urban renewal are responsible by one sector (namely, the Urban Renewal Authority in Hong Kong, and Urban Redevelopment Authority in Singapore) (Law, et al., 2009). By setting up a focused authority, it is meaningful to increase the efficiency of the decision-making process and resolve the issues of overlap of functions, buck-passing, etc., usually found in the much larger bureaucratic and hierarchical governments.

Thus, centralizing the functions and powers of urban renewal to fewer sectors can be a reference model to follow, and indeed, one with implications for China.

3.5.3 Informal Interference of Market Power

In China, government-led urban renewal projects have been criticized for being overly dependent on market power before 2011 (Li, et al., 2017; Liao, 2013). In 2011, a new regulation "*Regulation on the Expropriation of Buildings on State-owned Land and Compensation*" was issued by the central government. It disallows the involvement of developers in urban renewal decision-making to avoid the interference of market power (Li, et al., 2017). Developers can only bid for the land development right when land expropriation and building demolition are finished. Due to the high capital cost and limited fiscal budget, it is a risk for the governments to initiate urban renewal projects on the lands with low investment value. Therefore, building the informal relationship with developers in the decision-making process can effectively control the risk of the governments. However, informal relationships also represent informal collaboration and information exchange, which may lead to the loss of accountability and controllability of the system (DeLeon & Varda, 2009; Stone, 2008). Owing to the lack of transparency and accountability in the informal relationships, the involvement of developers not only affect the decisions but also results in their subsequent engagement in urban planning, land use planning, land expropriation, etc.. Thus, this approach may affect the quality of planning made by the government and violate the interests of the public. Due to the importance of financial resources and need for fiscal balance, attempts to exclude the market power is not always feasible. Thus, formally including but also regulating the collaboration between developers and other stakeholders in the decision-making process can be a solution. The formal regulations can provide a formal role for developers in the urban renewal decision-making process. It should strictly define their rights and obligations and restricts their informal interference in some stages (e.g., making compensation plan).

3.5.4 Negative Perceptions of Public Participation

In China, conflicts between the public (especially the in-situ residents) and other key stakeholders constantly arise, for example, the disagreement of the decision about the projects or relevant plans (e.g., compensation plan) (Hin & Xin, 2011; Li, et al., 2017). The lack of facilitation for public participation has often been

considered as the leading cause and has been criticized in many research studies (Enserink & Koppenjan, 2007; Li, Liu, et al., 2012; Tang, et al., 2008). Yet, in western society, broad public participation is considered as one of the key success factors of public projects (Brabham, 2012; Haffner & Elsinga, 2009). Therefore, scholars addressing the situation in China have argued that by introducing more public participation approaches and empowering the public can resolve the issue in China (Tang, et al., 2008; Zhang & Fang, 2004). However, the authors of the research study in this paper found out that few stakeholders believe the added values of public participation. The public, including both the general public and the affected residents, do not have a positive perception of authorities and professionals. Indeed, they barely trust decision-makers. Thus, they do not believe they can exert great influence in the urban renewal decision-making process, even if their participation can be enhanced. However, from the perspective of the professionals in the government and consulting parties, they indeed care about the voice of the public. Nevertheless, the professionals doubt if the public is eager to make contributions. They suspect that what the affected residents are really most concerned about is to maximize their compensation or get the ideal relocation. In many instances, the compensatory demands of in-situ residents go beyond several times of the market value, demands which are escessive. Different attitudes of stakeholders represent the different awareness of the role of the public. It can also be one reason for the absence of NGOs in urban renewal projects.

3.5.5 Needs of Specific Laws, Regulations, and Accountability

Specific laws, regulations, and accountability have been frequently mentioned by many professionals during our research. Without specific laws and regulations about urban renewal decision-making, the powers, functions, and obligations of different stakeholders are not clearly defined. This lack of clarity not only poses problems between plenty of governmental sectors, but also results in the inefficient work of local administrative organizations, low discourse power of third parties and the public. Without rational accountability, the stakeholders with power can keep influencing decision-making without taking into account the unintended consequences of their actions. As stated by Cheung and Leung (2007), government accountability can enhance the satisfaction of citizens, especially the powerless ones. In urban renewal, accountability can strengthen the responsibility of government sectors and increase their willingness to cooperate with less-empowered groups.

3.6 Conclusions

The study reported in this paper probes the stakeholder characteristics and their relationships in urban renewal decision-making in Chongqing, China. It shows that Stakeholder Analysis and Social Network Analysis can be jointly used in urban studies in the Chinese context, to better evaluate and understand the stakeholders in a whole system. This paper takes Yuzhong District in Chongqing as the study area and identifies 36 stakeholders. The results show the high complexity of stakeholder characteristics and the interaction network between them during urban renewal decision-making. Since most of the urban renewal projects in China are government-led, naturally, governments play the dominant role in the decision-making process. However, too many governmental sectors in different administrative levels involved in the process also pose great barriers to cooperation. The informal participation of developers can reduce government fiscal risk, but may create a side effect on the outcomes. The lack of public participation is seen as the primary cause of conflicts between the public and other stakeholders. Nevertheless, introducing more public participation approaches and giving more empowerment to the public may not work out successfully because most stakeholders, including the public themselves, hold negative perceptions of public participation.

Regarding the stakeholder participation, one of the top issues is to centralize the administrative functions and powers to fewer focused sectors, which could deal with the administration of urban renewal much more efficiently. In addition, informal relationships between developers and government sectors can be more formalized to reduce the risk of current problems. Specific laws and regulations about urban renewal also are needed to define the powers and functions of different stakeholders in detail. Furthermore, an accountability mechanism should be set up to enhance stakeholder responsibilities and increase the willingness of influential stakeholders to cooperate with less-empowered groups.

Due to the unique market institutional and social culture in China, further studies will be done to explore the problems in the urban renewal decision-making process. Based on this study, it is possible to establish a framework of urban renewal decision-making to support participatory urban renewal.

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4 An Analysis of Urban Renewal Decision-Making in China from the Perspective of Transaction Costs Theory

The Case of Chongqing

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ABSTRACT In China, there is a growing number of urban renewal projects due to the rapid growth of the economy and urbanization. To meet the needs of urban development, urban renewal requires a sound decision-making approach involving various stakeholder groups. However, current urban renewal decision-making is criticized for poor efficiency, equity, and resulting in many unintended adverse outcomes. It is claimed that high-level transaction costs (e.g., a great deal of time spent on negotiation and coordination) are the factors hidden behind the problems. However, few studies have analyzed urban renewal decision-making in a transaction costs perspective. Using the case of Chongqing, this paper aims at adopting transaction

costs theory to understand the administrative process of urban renewal decision-making in China. This research focuses on four key stakeholder groups: municipal government, district government, local administrative organizations, and the consulting parties. A transaction costs analytical framework is established. First, the decision-making stages of urban renewal and involved key stakeholder groups are clarified. Second, the transactions done by different stakeholder groups in each stage is identified, thus to analyze what types of transaction costs are generated. Third, the relative levels of transaction costs among different stakeholder groups were measured based on the interview. The empirical analysis reveals how transaction costs occur and affect urban renewal decision-making. Finally, policy implications were proposed to reduce transaction costs in order to enhance urban renewal.

KEYWORDS Urban Renewal, Decision Making, Transaction Costs, China

4.1 Introduction

Since the late 1970s, the reform and opening-up policy have brought about the rapid growth of the economy and urban population in China (Qian, 2010). However, under this background, the country faces continuous challenges in meeting the rigid demand for more high-quality buildings and neighborhoods in the urban area. Urban renewal becomes a national strategy and has been widely adopted in most Chinese cities. Today, urban renewal is becoming a critical approach to improve our urban life quality and will keep playing this vital role shortly (Chen et al. , 2008, Shen et al. , 2013). It rehabilitates the urban areas through physical change and other comprehensive plans to meet the requirement of urban development (Lee and Chan, 2008, Zhuang et al. , 2019).

Although urban renewal has made significant contributions in urban development, there are still many problems surrounded by, including conflicts between stakeholders, loss of social network and urban culture, impact on the living environment, and other unintended consequences (Yau and Chan, 2008, Zhuang et al. , 2017). Since urban renewal is high-input, irreversible public projects, decision-making plays a dominant role in project success (Liu et al. , 2017, Zhou et al. , 2017). Many studies show that how the decisions were made is one of the major causes of the above problems (Juan et al. , 2010, Maginn, 2007, Mayer et al. , 2005, Wang et al. , 2014). In China, urban renewal decision-making is government-led but

strongly affected by the interaction between different stakeholders in the complex administrative process (Juan, Roper, 2010, Zhou, Zhou, 2017). The interaction reflects in the transfer of information or knowledge between stakeholders, which would incur much transaction costs (Hastings and Adams, 2005).

Arrow (1969) firstly defined "transaction costs" as the costs of running an economic system, including exclusion costs and costs of communication, and the costs of disequilibrium. In short, transaction costs can be seen as all costs other than the production costs (Chung, 1994). Contrary to the latter, transaction costs differ for resource allocation and changes with the economic systems (Arrow, 1969). Based on this, transaction costs are considered as the costs of an institution in essential (Cheung, 1989). It is also supported by North (1990), who claimed that transaction costs are the sources of power for social, economic, and political institutions. Transaction costs are certain to emerge since there is unavoidably bounded rationality, opportunism and deficient information, and the levels and characteristics of transaction costs vary in different institutions (Buitelaar, 2004).

Although the transaction costs have been adopted in many fields, its introduction into land development is relatively new. This has brought about a new thought to explore the theory and practice in this context. Alexander (2001) offers a conceptual model by adopting transaction costs theory to analyze different governance structures in land use planning and development. Buitelaar (2004) proposes a framework to identify the transaction costs in the land development process and compare the user rights regime in the Dutch context. Aiming at assessing the institutional efficiency of different governance structures, Cho (2011) applies transaction costs theory in analyzing the housing redevelopment process in Korea. Moreover, to explore the institutional barriers in urban village redevelopment in China, Lai and Tang (2016) consider the redevelopment as a series of transactions, thus to analyze the role of institutions. Although there are increasing studies on land development concerning transaction costs, the adoption of this theory is mainly focusing on the implementation process. The explorations of the early stage (decision-making) are quite limited. Moreover, there exist unique culture and institutions in China, including the stakeholders' awareness on public projects, state-ownership of urban land, the strong top-down administrative approach, etc. (Enserink and Koppenjan, 2007, Li et al. , 2012, Tang et al. , 2008). These are different from China's western counterparts. Due to the uniqueness, it is not feasible to directly learn the knowledge out of Chinese contexts. Based on the above reasons, an in-depth analysis of current decision-making of urban renewal given transaction costs theory is vital to better understand the problems in the Chinese context, thus to make improvements and deal with the barriers that occurred in the process.

Consequently, this paper aims at adopting transaction costs theory to understand the current administrative process of urban renewal decision-making in China. The following research questions are answered: what is the administrative process of urban renewal decision-making? What are the transaction costs borne by different key stakeholder groups in each decision-making stage? Moreover, what are the levels of different transaction costs given to each key stakeholder group? Chongqing was selected as the case city for its representativeness of southwest China and a large number of urban renewal projects. The remainder of this paper was structured as follows. First, it reviewed on the background of transaction costs and urban renewal decision-making in China. Then, it described the analytical framework, case area, and data collection. Following this, this paper analyzed the transaction costs borne by different key stakeholder groups in urban renewal decision-making. At last, discussion and conclusions are presented.

4.2 Urban Renewal Decision-Making and Transaction Costs

4.2.1 Urban Renewal Decision-Making and Key Stakeholder Groups

The decision making of urban renewal is not just a 'single-decision', which determines whether to do it or not. It considers the urban development, living environment, renewal area selection, timing, mode, social risks, compensation, etc. through a systematic process (Jiang et al. , 2012, Tang, 2015, Zhuang, Qian, 2019). In this research, the decision-making of urban renewal is defined as the formal administrative process starting from project application, and before housing expropriation and demolition. In China, the detailed decision-making process differs from one city to another, but based on literature and the authors' knowledge, it can be categorized into four major stages in general, namely preparation stage, project planning stage, compensation planning stage, and final agreement stage (Liao, 2013, Tian, 2009, Yang, 2007). In the preparation stage, preliminary information searching is conducted to list neighborhoods which are probably brought under an urban renewal plan. Then, in the second stage, a comprehensive project plan will be made, including the selection of renewal area, time arrangement, renewal mode,

financing arrangement, etc. In the third stage, a compensation plan of housing expropriation in the designated urban renewal area will be made. In the final stage, the compensation plan will be announced to collect public opinions and reach final agreements between government sectors and the in-situ residents. If the agreement cannot be reached, further negotiation or plan modification will be conducted.

In China, there exist many stakeholder groups participating in the urban renewal decision-making process, including the different levels of governments, consulting parties, in-situ residents, and other organizations (Zhuang, Qian, 2019). The government plays a dominant role in the administration process of decision-making. In many studies, the government is considered as one stakeholder, but in practice, the roles of government differ from one administrative level to another (Tang, 2015, Yi et al. , 2017). Based on the authors' previous research, taking Chongqing as an example, three administrative levels of governments are the main bodies in administrative activities of urban renewal decision-making (Zhuang, Qian, 2019). The primary role of the municipal government is to guide and oversee the work of the district government and to approve the relevant plans. District governments hold the strongest power in decision-making and involve in the whole administrative process. The local administrative organizations are the grassroots-level governments, which consist of two sub-levels (sub-district administrative offices and neighborhood committees). They are mainly responsible for the groundwork (e.g., field investigation, policy advocacy) to support the work of the district government. Consulting parties, including scholars, planning/design agency, real estate appraisal agency, building safety appraisement agency, etc., are the stakeholder group who conducts professional research and offer consulting services to the governments in the decision-making process (Zhuang, Qian, 2017). Different consulting parties deeply involve in diverse administrative activities to support the projects. The in-situ residents are also an important stakeholder in urban renewal, but their participation is relatively passive in decision-making. In view of administration process, in-situ residents cannot exert their influence on decision-making in an initiative way (Zhuang, Qian, 2019). In addition, developers also play an important role. However, in accordance with current laws and regulations, market power is not allowed to involve in decision-making. Therefore, in formal administrative process, there is no channel for developers to involve before project implementation (Zhuang, Qian, 2019). Since urban renewal is top-down public projects in China, administrative power is dominantly influential to the decision-making (Li et al. , 2018, Yi, Liu, 2017, Zhuang, Qian, 2019). To better explore the urban renewal decision-making, this paper selects the stakeholder groups which highly and actively participate in administrative activities in decision-making as the focuses. Therefore, based on these criteria, four key stakeholder groups are focused on: municipal government, district government, local administrative organizations, and the consulting parties.

4.2.2 Definition and Types of Transaction Costs

The transaction refers not only to the goods or services but also includes the transfer of information, knowledge, and ideas (Shahab et al. , 2018). Buitelaar (2004) defines the transaction costs as the costs for increasing the availability of information and reducing uncertainty brought by the institutions. Transaction costs are one of the significant elements in the analysis of all public policies and projects (McCann, 2013, Shahab, Clinch, 2018). In the facet of transaction costs, the series activities can be seen as numbers of transaction items which generate different levels of transaction costs (McCann, 2013). Transaction costs exert influence on the efficiency and the outcome of projects. The level of the influence varies since the stakeholders have divergent perceptions and behaviors; the interactions between them are also diverse (Coggan et al. , 2013). Taking transaction costs into account can enhance the efficiency and equity of policy instruments, perceive unintended consequences, design more practical policy instruments, and provide the basis to include various aspects of the institutional environment (Garrick et al. , 2013, McCann, 2013, Qian et al. , 2012, Shahab, Clinch, 2018).

Studies have been done to probe the typologies of transaction costs. There are mainly two categorization methods. One is based on the time the transaction costs emerged. For example, Shahab, Clinch (2018) categorize transaction costs as ex-ante, ongoing, and ex-post costs according to three planning steps: preparation, implementation, and revision. The other categorization is given the way to bear the costs (Michaelowa and Jotzo, 2005, Mundaca T et al. , 2013, Qian et al. , 2015). In this category, the types of transaction costs are listed according to the relevant references in the field of land development, which is shown in Table 4.1. To summarize, transaction costs include information searching costs, research costs, coordination/negotiation costs, monitoring costs, approval costs.

TABLE 4.1 Type of Transaction Costs in Field of Land Development According to Relevant Literatures

Types	Shahab, Clinch, 2018	Buitelaar, 2004	Cho, 2011	Hastings and Adams, 2005	Lai and Tang, 2016
Information Searching Costs	√	√	√	√	√
Research Costs	√	√		√	√
Coordination/Negotiation Costs	√	√	√	√	√
Approval Costs	√	√	√		
Monitoring Costs		√		√	√

4.2.3 Transaction Determinants in the Context of Urban Renewal Decision-Making

Each transaction has its determinants that strongly affect the magnitude and distribution of transaction costs. According to Williamson (1985), the determinants of transactions can be concluded as three key dimensions, which are asset specificity, uncertainty, and timing. In urban renewal decision-making, these three dimensions have specific characteristics.

4.2.3.1 Asset Specificity

Asset specificity refers that the transaction of an asset that cannot be easily redeployed and substituted. Because the transaction-specific investments in capital, information, etc. for the particular transactions are the sunk costs, which have no or little value outside of the particular transaction. Since each urban renewal project is unique in location, neighborhood environment, building conditions, cultural value, property ownership, etc., the decision made for one project in particular. Thus, the investments cannot easily be reinvested into the decision-making process of another project. According to Williamson (1991), asset specificity can be categorized into four types: site-specificity (particular sites of an asset), physical asset specificity (specific inputs and actions), human asset specificity (specialized knowledge and skills), and dedicated asset (discrete investment in general production for particular transaction, such as expanding production lines for a specific buyer).

In urban renewal decision-making, the transaction is mainly about information or knowledge rather than physical productions. Therefore, asset specificity can be categorized into three types: site-specificity, information specificity, and resident specificity. Site specificity means the specific site of the designated urban renewal area (buildings/neighborhoods). The size, location, building conditions, neighborhood environment, etc. of a site strongly affect decisions and causes lots of research costs. Information specificity adopts the concept of the above-mentioned human asset specificity. It represents the specific information or knowledge required in urban renewal decision-making, such as public voice, existing planning, and policies. Collecting relevant information induces information searching costs. Resident specificity comes from the concept of physical asset specificity, but it has its own meaning in urban renewal since the specific inputs and actions are for the in-situ residents. In every urban renewal area, there may be hundreds or thousands of in-situ residents with diverse demands. It requires lots of research and coordination/

negotiation costs to develop the detailed compensation plan for each residential unit and achieve the agreements on it.

4.2.3.2 Uncertainty

Uncertainty is the second dimension of transaction determinants. The source of uncertainty is strongly related to the asymmetric information about the transaction, the perceptions and actions of the stakeholders, and the unpredictable issues brought by the relevant natural, organizational, and institutional environment (Mettepenningen and Van Huylenbroeck, 2009). Based on this, scholars conclude three types of uncertainty (Coggan et al. , 2010, Fan et al. , 2018, Williamson, 1985). The first one is the uncertainty of nature in the future state. It means that the conditions, such as natural disaster, may bring substantial restriction in the physical environment. The second one refers to the lack of clarity of the actions of whether stakeholders should do or not, because of the poorly-specified policies, regulations, contracts, etc. The third type is related to the behavior of stakeholders attributed to opportunism since there always exists distrust between them.

In the decision-making of urban renewal, uncertainty can lead to extra works and more communications for all stakeholder groups throughout the process. Based on the definition, there are two types of uncertainty in urban renewal decision-making, namely behavior uncertainty, and institutional uncertainty. The former is the result of opportunism. It causes inefficiency in communication and cooperation. The latter is created by the existing institution, which leads to extra works in the administrative process. Since the natural conditions (e.g., thunderstorm, earthquake) are not relevant to the decision-making process, those elements are not considered in this research.

4.2.3.3 Timing

The timing dimension is also a critical transaction determinant. In one project, long-lasting transactions incur much more and complicated barriers such as bilateral monopoly and opportunism (Cho, 2011, Coggan, Whitten, 2010, Williamson, 1985). When there are recurring transactions between the same participants, transaction costs can be reduced through transferring the past information and knowledge, to the newly happened transaction (Fan, Chan, 2018). In urban renewal decision-making, to reduce transaction costs, it requires to contain more transferable

experience. Therefore, the transferability of a transaction is adopted to measure in what level the transaction costs can be trimmed down. In one urban renewal project, it can also be reflected in the time spend on a transaction.

4.3 Research Methodology

4.3.1 Analytical Framework

Based on the literature review on urban renewal decision-making and transaction costs theory, an analytical framework is established, which is shown in Figure 4.1. This research selects Chongqing as the case study area in China by using the analytical framework. This framework consists of three steps. In the first step, the detailed administrative process and involved stakeholder groups in each decision-making stage are clarified.

The second step aims at identifying the transaction costs borne by different stakeholder groups in each urban renewal decision-making stage. Based on the transaction determinants “asset specificity” and “uncertainty,” what are the transactions that emerged in each stage will be identified. Since it is impossible to reveal all the separate detailed transactions in every project, the simplification of transaction items is adopted. In this research, all the transactions are identified on an aggregated level by equating them with kinds of activities in decision-making. For example, “carefully selecting professional service providers” is one kind of activity. It includes the work of contact between sectors, qualification deliberation, tender evaluation, documentation, contracting, etc. It is unnecessary and impossible to list every single work, respectively. Instead, “carefully selecting professional service providers” is used to represent the relevant works and considered as one transaction. According to the identified transaction, what types of transaction costs are generated can be found out. In urban renewal decision-making, the types of transaction costs can be categorized into information searching costs, research costs, coordination/negotiation costs, monitoring costs, and approval costs, etc., (Buitelaar, 2004, Cho, 2011, Hastings and Adams, 2005, Lai and Tang, 2016, Shahab, Clinch, 2018).

The third step aims at measuring the relative levels of transaction costs borne by different stakeholder groups. The transaction determinant "timing" is applied. All transactions are rated by each stakeholder group, respectively, based on the time they spent in general. It can reflect the level of related transaction costs.

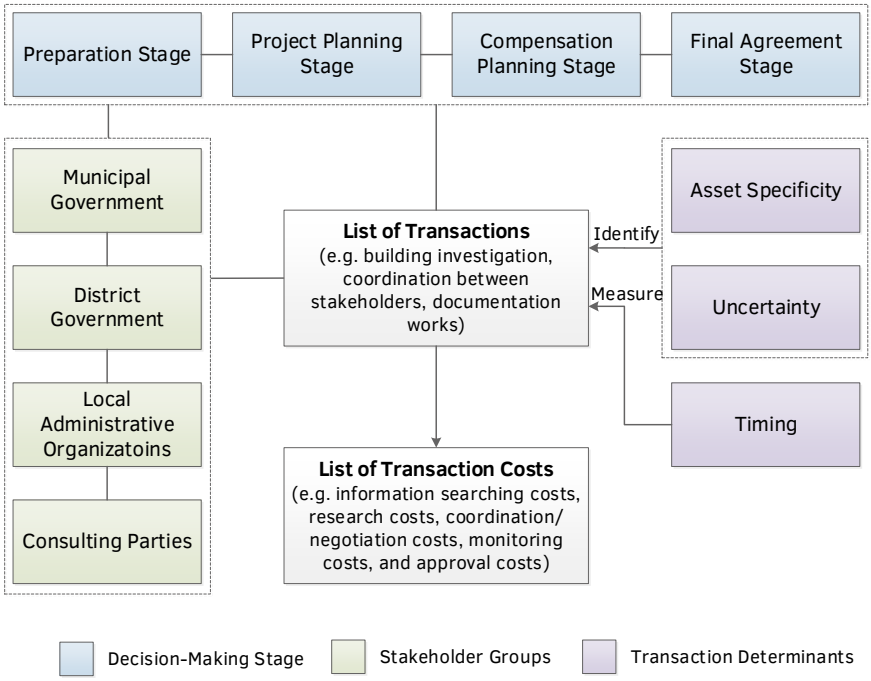

FIG. 4.1 Analytical Framework

4.3.2 Case Area

Chongqing is one of five municipalities directly under the national government. It is a typical sample of urban development in China (Zhou, Zhou, 2017). In the last decades, it has experienced rapid urbanization and economic growth. From 1997 to 2016, the urbanization rate in Chongqing increased from 31.0% to 62.6%, and its annual growth rate of gross domestic product (GDP) is 13.78% (CSB, 2017b). To meet the rigid demand for urban housing and maintain economic growth, in 2008, Chongqing Municipal Government issued a new policy to make urban renewal as

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one of the key urban development strategies (Liu et al. , 2012). From 2010 to 2017, there were 1423.54 hectares of urban renewal projects being implemented (CSB, 2017a). Featured by the massive urban renewal projects, Chongqing provides many resources and project cases for conducting relevant research.

In Chongqing, the municipality can be divided into 38 sub-divisions, including 26 districts and 12 counties. The central city area, also named the main districts area, is the core of the city and indispensable in the history of urban development. It consists of 9 districts named Yuzhong, Dadukou, Jiangbei, Shapingba, Jiulongpo, Nan'an, Beibei, Yubei, and Banan. The map is shown in Figure 4.2. The institution and organizational structure of the above nine districts are similar. In 2016, 191.02 hectares of urban renewal projects were planned and implemented in the main districts area, exerting influence on 22015 households. The main districts area represents one hotspot of urban renewal in Chongqing. Thus, this area is selected for data collection.

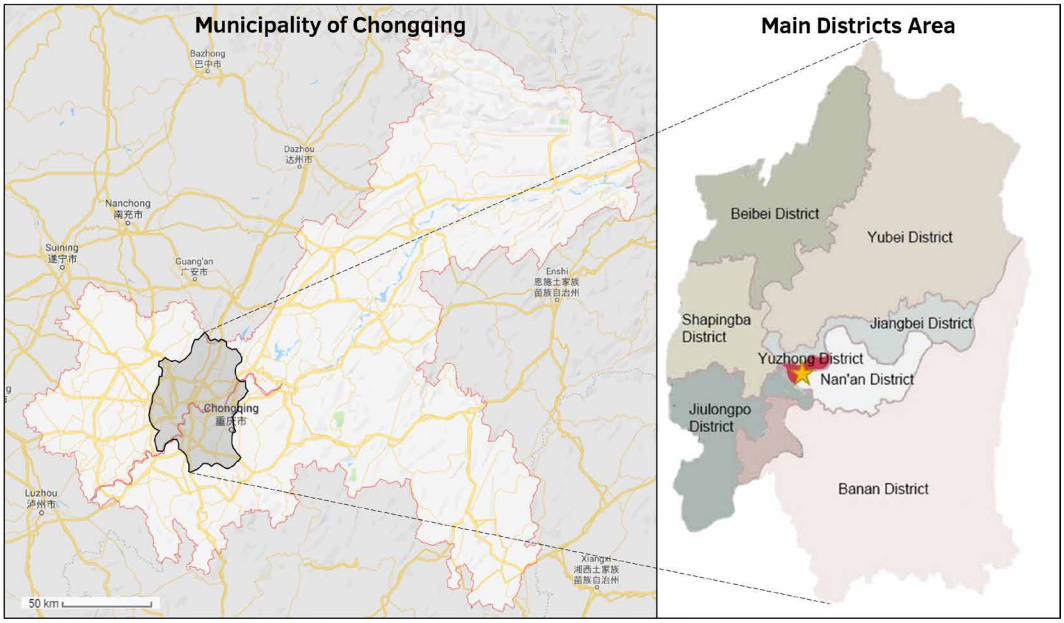

FIG. 4.2 Map of Chongqing Municipality and Its Main Districts Area

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4.3.3 Data Collection

The semi-structured interviews are applied for data collection in this research. As shown in Table 4.2, the interviews were conducted with 17 interviewees representing municipal government, district government, local administrative organizations, and consulting parties. All the selected representatives were professionals who have rich knowledge and practical experience in urban renewal projects in Chongqing.

TABLE 4.2 Background of the Interviewees.

Group	ID	Role	Function of department
Municipal Government	M1	Government Officer	Working in Bureau of Urban Planning; Urban planning specialist, more than 25 years' working experience
	M2	Government Officer	Working in Commission of Urban-Rural Development; Over 15 years' experience in urban renewal projects (shanty town)
	M3	Government Officer	Working in Administration of Land, Resources, and Housing; Over 10 years' experience in land management in urban renewal projects
	M4	Government Officer	Working in Administration of Land, Resources, and Housing; more than 10 years' experience in housing/land expropriation
District Government	D1	Vice Director	Working in Commission of Development and Reform; Urban development specialist, 10 years' experience in renewal planning
	D2	Vice Director	Working in Bureau of Housing Management; Over 20 years' working experience in housing/land expropriation
	D3	Government Officer	Working in Bureau of Housing Management; Over 10 years' experience in grass-roots work in urban renewal projects
	D4	Vice Director	Working in Bureau of Urban Planning; urban planning specialist
	D5	Government Officer	Working in the Bureau of Land and Resources; land use planning and land management specialist
Local Administrative Organizations	L1	Director	Working in Sub-District Administrative Office; specialist of grass-roots work in urban renewal projects
	L2	Director	Working in Neighborhood Committee; specialist of grass-roots work in urban renewal projects
	L3	Government Officer	Working in Neighborhood Committee; specialist of grass-roots work in urban renewal projects
Consulting Parties	C1	Professor	Working in a university; Over 15 years' research and practical experience in urban renewal projects
	C2	Professor	Working in a university; Over 10 years' research and practical experience in urban renewal
	C3	Researcher	Working in a university; professionals of urban renewal
	C4	Vice Director	Working in a research institution, more than 10 years' working experience in urban renewal policy consultation
	C5	Director	Working in a planning and design institute, professionals of urban planning and renewal

Prior to the interviews, the authors had listed the works (transactions) that different stakeholder groups need to do in the administrative process of urban renewal decision-making according to the literature review and authors' previous research. During the interview, the interviewees were asked (1) to clarify the administrative activities and their roles in decision-making of urban renewal; (2) verify and adjust the list of works (transactions) they need to do, and illustrate the purpose of each work; (3) rate the level of time they spend on each work on a 5-point Likert scale, from 1 = "very little time" to 5 = "a great deal of time"; (4) to share more views about the current problems and barriers of urban renewal decision-making beyond the framework, and provide some implications to improve it.

4.4 Results

4.4.1 Urban Renewal Decision-Making Stages in Chongqing

Based on the interviews, in the case of Chongqing, there are several administrative activities and stakeholder groups in each decision-making stage being identified, which is shown in Figure 4.3.

In the preparation stage, local administrative organizations and sectors in the district government independently search urban areas (neighborhoods/buildings), which may require urban renewal. The information they search consists of two dimensions. One is the rough dilapidated condition of buildings/neighborhoods, and the other one is the demand for urban development.

In the project planning stage, municipal government, district government, local administrative organizations, and consulting parties are all participated. To make a comprehensive project plan, district government carefully select consulting parties in the field of urban/community planning, land survey, building safety appraisement, etc. Series work of in-depth research and information searching are cooperatively undertaken all stakeholder groups except municipal government. Based on this, the renewal areas are designated from the application list. Then, the comprehensive project plan, including renewal modes, time, financial arrangement, etc. are developed. The approval of the project plan is a matter for all relevant sectors (urban planning, housing management, land management, etc.) in the district and

municipal level. In reaching the approval, there may be rounds of feedbacks taking place between governmental sectors and administrative levels.

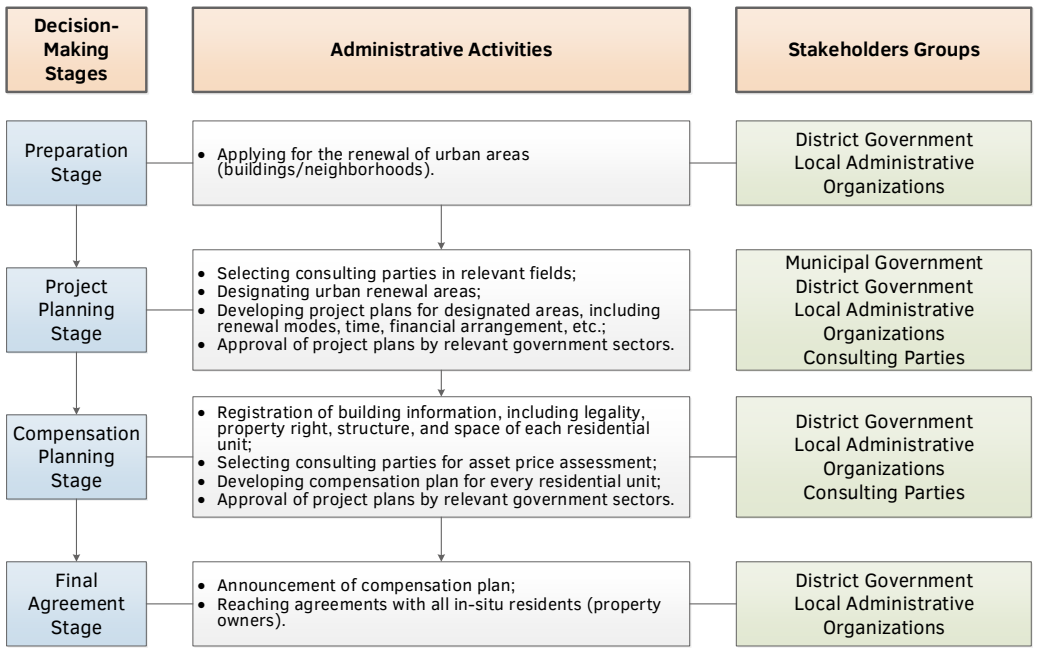

FIG. 4.3 Whole Urban Renewal Decision-Making Process in Chongqing, China

In the compensation planning stage, district government, local administrative organizations, and consulting parties exert joint effort to make compensation plans for housing expropriation. Before drafting the plan, investigation of land and property rights, living space, building structure, etc. of each residential unit will be conducted by the district government and local administrative organizations. Then, local administrative organizations will organize a community meeting to select a qualified consultant institution for an asset price assessment. Based on the above works, a detailed compensation plan for every residential unit in the designated urban renewal area is drafted by the district government. The plan will be comprehensively evaluated by other relevant sectors at the district level. Some rounds of feedbacks may also be required to reach the approval.

In the final agreement stage, the district government and local administrative organizations will cooperatively work to reach the final agreement on the

compensation plan with in-situ residents (property owners). First, the compensation plan will be announced to the public. Then, lots of work will be done to assess social risks, collect the opinions of in-situ residents, modify the plan, and persuade all in-situ residents to agree on it. Opinion collection – plan modification – persuasion is a feedback loop that cannot be skipped. When all agreements are reached, the whole urban renewal decision-making process is ended.

4.4.2 Identification of Transactions and Transaction Costs in Each Decision-Making Stage

According to the transactions' determinants, there are 19 transaction items being evoked in the above four stages being identified, triggering five types of transaction costs. Some transactions occur in only one stage, but others can be found in more than one stage. The list of transactions is validated and consolidated through the interviews. The details in each stage can be seen in Table 4.3, 4.4, 4.5, and 4.6, respectively.

Table 4.3 shows the identified transactions in the preparation stage. Although searching for the potential urban renewal area is a key foundation of the whole decision-making, there are only two transactions being evoked.

TABLE 4.3 Transactions under Transactions' Determinants in Preparation Stage

Determinants	Sub-Determinants	Transactions under Each Determinant	Groups		TCs	
			D	L	I	IV
Asset Specificity	Information Specificity	AI1. Information searching for potential renewal areas	√	√	√	-
Uncertainty	Institutional Uncertainty	UI1. Detailed documentation work for administrative approval/application to fulfill the institutional requirement	√	√	-	√

Note: D – District Government; L – Local Administrative Organization; I - Information Searching Costs; IV – Approval Costs.

At the project planning stage in Table 4.4, there are 13 transactions identified. Both the behavior uncertainty and institutional uncertainty play a vital role. It raises negotiation/coordination costs and approval costs borne by all stakeholder groups. Moreover, site-specificity is another key determinant of transactions. It raises research costs and information searching costs to comprehensively investigating the buildings and neighborhoods and to ensure the designated projects are not against existing policies and planning.

TABLE 4.4 Transactions under Transactions' Determinants in Project Planning Stage

Determinants	Sub-Determinants	Transactions under Each Determinant	Groups				TCs				
			M	D	L	C	I	II	III	IV	V
Asset Specificity	Site Specificity	AS1. Compliance with requirements for specific land use, project boundaries, location, etc.	√	√	√	√	-	√	-	-	-
		AS2. Investigation of neighborhoods (public space, facilities, and amenities, hygiene condition, accessibility, cultural value, etc.)	-	√	√	√	-	√	-	-	-
		AS3. Investigation of buildings (year of built, property right, physical condition, structure, function, cultural value, etc.)	-	√	√	√	-	√	-	-	-
		AS6. Communicating with different stakeholder groups about the renewal mode, time, and financial arrangement, etc.	√	√	-	√	-	-	√	-	-
	Information Specificity	AI2. Information searching for an existing policy, planning, and financial situation for clarifying project possibilities	√	√	√	√	√	-	-	-	-
		AI3. Information searching for public willingness and demands	-	√	√	√	√	-	-	-	-
Uncertainty	Behavioral Uncertainty	UB1. Coordination between different stakeholder groups to avoid misconstruction and build mutual trust	√	√	√	√	-	-	√	-	-
		UB2. Carefully selecting professional service providers	-	√	-	-	-	√	-	-	-
		UB3. Monitoring and guiding the work of governmental sectors	√	√	-	-	-	-	-	-	√
	Institutional Uncertainty	UI1. Detailed documentation work for administrative approval/application to fulfill institutional requirement	√	√	√	√	-	-	-	√	-
		UI2. Coordination and negotiation between different stakeholder groups to clarify their demands and standards in the administrative process.	√	√	√	√	-	-	√	-	-
		UI3. Extra work to revise the plans due to the unclear and changeable requirements of different governmental sectors	-	√	-	√	-	-	-	√	-
		UI4. Developing assessing criteria or relevant policy for different projects due to the lack of relevant laws and regulations	√	√	-	√	-	√	-	-	-

Note: M - Municipal Government; D – District Government; L – Local Administrative Organization; C – Consulting Party; I - Information Searching Costs; II - Research Costs; III – Coordination/Negotiation Costs; IV – Approval Costs; V – Monitoring Costs.

At the compensation planning stage in Table 4.5, similarly, both types of uncertainties are the key determinants of transactions. They generate lots of negotiation/coordination and approval costs and thus prolong the duration of plan making, which raises the risk of failure of the whole compensation plan. Site specificity is another major determinant of transactions and raises much research costs. Much of the efforts are made in investigating targeted buildings and assessing asset prices.

TABLE 4.5 Transactions under Transactions' Determinants in Compensation Planning Stage

Determinants	Sub-Determinants	Transactions under Each Determinant	Groups			TCs			
			D	L	C	II	III	IV	V
Asset Specificity	Site Specificity	AS3. Investigation of buildings (year of built, property right, physical condition, structure, function, cultural value, etc.)	√	√	-	√	-	-	-
		AS5. Assessment of asset prices	√	-	√	√	-	-	-
	Residents Specificity	AR1. Developing/modifying compensation plan and housing expropriation contracts for each residential unit	√	-	-	√	-	-	-
Uncertainty	Behavioral Uncertainty	UB1. Coordination between different stakeholder groups to avoid misconstruction and build mutual trust	√	√	√	-	√	-	-
		UB2. Carefully selecting professional service providers	√	-	-	√	-	-	-
		UB3. Monitoring and guiding the work of governmental sectors	√	-	-	-	-	-	√
	Institutional Uncertainty	UI1. Detailed documentation work for administrative approval/application to fulfill the institutional requirement	√	√	√	-	-	√	-
		UI2. Coordination and negotiation between different stakeholder groups to clarify their demands and standards in the administrative process.	√	√	√	-	√	-	-
		UI3. Extra work to revise the plans due to the unclear and changeable requirements of different governmental sectors	√	-	-	-	-	√	-

Note: M - Municipal Government; D – District Government; L – Local Administrative Organization; C – Consulting Party; II - Research Costs; III – Coordination/Negotiation Costs; IV – Approval Costs; V – Monitoring Costs;

At the final agreement stage in Table 4.6, the resident specificity and behavior uncertainty are the major determinants of transactions that generate much coordination/negotiation costs. Due to the diverse situation and demands of in-situ residents, reaching an agreement with all in-situ residents extremely hard. If the agreements cannot finally be reached, the whole decision-making process may be delayed by more than one year, wasting large amounts of resources and time.

TABLE 4.6 Transactions under Transactions' Determinants in Final Agreement Stage

Determinants	Sub-Determinants	Transactions under Each Determinant	Groups		TCs			
			D	L	II	III	IV	V
Asset Specificity	Site Specificity	AS4. Assessment of social risks	√	√	√	-	-	-
	Residents Specificity	AR1. Developing/modifying compensation plan and housing expropriation contracts for each residential unit	√	-	√	-	-	-
		AR2. Coordination and negotiation with in-situ residents to reach agreements on compensation plan and housing expropriation contracts	√	√	-	√	-	-
Uncertainty	Behavioral Uncertainty	UB1. Coordination between different stakeholder groups to avoid misconstruction and build mutual trust	√	√	-	√	-	-
		UB3. Monitoring and guiding the work of governmental sectors	√	-	-	-	-	√
		UB4. Conducting mass work, such as propaganda, public hearing, one-to-one talks, etc. to avoid social contradiction	√	√	-	√	-	-
	Institutional Uncertainty	UI1. Detailed documentation work for administrative approval/application to fulfill the institutional requirement	√	√	-	-	√	-

Note: D – District Government; L – Local Administrative Organization; II - Research Costs; III – Coordination/Negotiation Costs; IV – Approval Costs; V – Monitoring Costs;

4.4.3 Level of Transactions Costs Borne by Each Stakeholder Group

To analyze the level of transaction costs, the relative level of time consumed on each transaction by each stakeholder group is measured. The result is presented by mean scores and summarized with rankings in Table 4.7. It is shown that except "AR1. Developing/modifying compensation plan and housing expropriation contracts for each residential unit", all other transactions are experienced by more than one stakeholder group. Overall, for four key stakeholder groups, most of their top 3 time-consuming transactions generate negotiation/coordination costs. Among these high-ranking transactions, "UB4. Conducting mass work, such as propaganda, public hearing, one-to-one talks, etc. to avoid social contradiction" and "AR2. Coordination and negotiation with in-situ residents to reach agreements on compensation plan and housing expropriation contracts" are the top two of both district government and local administrative organizations. These two transactions share two commonalities. One is that they both refer to the coordination/negotiation with in-situ residents, and the other is they both occur in the final stage of the decision-making process. "UB1. Coordination between different stakeholder groups to avoid

misconstruction and build mutual trust" is the only transaction rank the top 4 of all four stakeholder groups. Different from the above two, this transaction occurs in three decision-making stages (except for the first stage). Given consulting parties, besides coordination/negotiation costs, the top 3 time-consuming transactions also relate to lots of research costs, which is different from all the other stakeholder groups. The result also indicates that the district government bears the transaction costs generated by all 19 identified transactions. On the contrary, the municipal government experiences the minimum number of transactions (8 out of 19) among the four stakeholder groups. Consulting parties spend their time on 13 transactions, and the mean score of these 13 transactions is higher than all others.

TABLE 4.7 Mean Scores of Transactions' levels in the View of Different Key Stakeholder Groups

TCs	Transactions in Urban Renewal Decision-Making Process	M		D		L		C	
		Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean
I	T7. Information searching of potential target neighborhoods	-	-	15	2.40	7	2.67	-	-
	T8. Information searching for an existing policy, planning, and financial situation for clarifying project possibilities	4	2.50	16	2.20	11	1.33	11	2.60
	T9. Information searching of public willingness and demands	-	-	7	3.60	**3**	**3.33**	5	3.60
II	T1. Compliance with requirements for specific land use, project boundaries, location, etc.	4	2.50	9	3.20	11	1.33	11	2.60
	T2. Investigation of neighborhoods (public space, facilities, and amenities, hygiene condition, accessibility, cultural value, etc.)	-	-	4	4.00	4	3.00	**3**	**4.00**
	T3. Investigation of buildings (year of built, land and property right, physical condition, structure, function, cultural value, etc.)	-	-	7	3.60	4	3.00	**2**	**4.20**
	T4. Assessment of social risks	-	-	12	2.80	7	2.33	-	-
	T5. Assessment of asset prices	-	-	19	1.20	-	-	7	3.40
	T10. Developing/modifying compensation plan and expropriation contracts for each residential unit	-	-	9	3.20	-	-	-	-
	T13. Carefully selecting professional service providers	-	-	18	2.00	-	-	-	-
	T19. Developing assessing criteria or relevant policy for different projects due to the lack of relevant laws and regulations	4	2.50	12	2.80	-	-	13	2.40

>>>

TABLE 4.7 Mean Scores of Transactions' levels in the View of Different Key Stakeholder Groups

TCs	Transactions in Urban Renewal Decision-Making Process	M		D		L		C	
		Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean
III	T6. Communicating with different stakeholder groups about the renewal mode, time, and financial arrangement, etc.	**3**	**3.00**	4	4.00	-	-	8	3.20
	T11. Coordination and negotiation with in-situ residents to reach agreements on compensation plan and expropriation contracts	-	-	**2**	**4.40**	**2**	**4.33**	-	-
	T12. Coordination between different stakeholder groups and build mutual trust	**1**	**3.75**	**3**	**4.20**	4	3.00	**3**	**4.00**
	T15. Conducting mass work, such as propaganda, public hearing, one-to-one talks, etc. to avoid social contradiction	-	-	**1**	**4.60**	**1**	**5.00**	10	3.00
	T17. Coordination and negotiation between different stakeholder groups to clarify their demands and standards in the administrative process.	**2**	**3.50**	4	4.00	10	1.67	**1**	**4.60**
IV	T16. Detailed documentation work for administrative approval/application and fulfilling institutional requirement	8	1.50	12	2.80	8	2.33	8	3.20
	T18. Extra work to revise the plans due to the unclear and changeable requirements of different governmental sectors	-	-	11	3.00	-	-	5	3.60
V	T14. Monitoring and guiding the work of governmental sectors	7	1.75	7	2.20	-	-	-	-

Note: M - Municipal Government; D – District Government; L – Local Administrative Organization; C – Consulting Party; I - Information Searching Costs; II - Research Costs; III – Coordination/Negotiation Costs; IV – Approval Costs; V – Monitoring Costs;

4.5 Discussions

4.5.1 Uneven Distribution of Transaction Costs

In many government-initiated public projects, the institutional design ignores transaction costs incurred before the implementation process (Alexander, 2001, Shahab, Clinch, 2018). As it is clearly shown in the findings, the decision-making process of urban renewal is full of transaction costs. Moreover, the distribution of transaction costs is uneven, given not only decision-making stages but also stakeholder groups who bear the costs.

Essentially, the working quality of first two decision-making stages (developing project plan) is highly relevant to the barriers of the last two (reaching agreement on copmensation plan). However, the transaction costs in the former two stages are much less than the latter. Moreover, given the last two stages, the quality of compensation planning (third stage) is decisive to the work difficulty in reaching agreements on the plan (fourth stage). However, similarly, the final stage evokes most of the transaction costs than the third.

In terms of four key stakeholder groups, the transaction costs they bear are also different from one to another. District government absorbs transaction costs generated by all the identified transactions, followed by consulting parties, local administrative organizations, and municipal government. Although they bear transaction costs differently, all of them complained that they spend too much time on the works, which are indirectly related to their targets and unavoidable. Indeed, it is meaningless to equally distribute transaction costs to every stakeholder group under any condition. Given that the “uneven” is approximately equal to “unfair”, a more balanced distribution may reduce the risks and barriers of the project.

4.5.2 The Domination of Negotiation/Coordination Costs in Whole Decision-Making Process

The urban renewal decision-making process involves many uncertainties, which lead to lots of coordination/negotiation costs. This type of transaction costs plays a dominant role in the whole process borne by every key stakeholder group. One

kind of coordination/negotiation costs is generated in the administrative process. It occurs not only between the four key stakeholder groups but also between many sectors within each group (e.g., different government sectors). There are more than 20 all three levels of government sectors and several consulting parties in different fields involving in and taking different responsibilities. Based on current regulations, different sectors in the district government can initiate and coordinate the work for a different type of urban renewal projects. For example, Commission of Construction is responsible for shanty town redevelopment; Bureau of Urban Planning control the renewal in designated townscape region; Bureau of Housing Management manage the projects in typical dilapidated neighborhoods and buildings. No matter which sector coordinates the project, it requires the active cooperation of more than ten other sectors and consulting parties. Under current regulation, in district government, there is no single sector can fully administrate urban renewal, and in municipal government, sectors only deal with the works and documents of corresponding sectors in district government. To complete their tasks, all sectors at different administrative levels have to spend lots of time communicating with many others to discuss the works, clarify their demands and standards, build mutual trust, and avoid misconstruction.

Another kind of coordination/negotiation cost is generated in communicating with in-situ residents (property owners), which occurs in the final step of decision-making. The work needs to be done by both the district government and local administrative organizations to persuade hundreds or thousands of residents to understand and agree on the compensation plan made by the government. However, normally, there are scores of in-situ residents not satisfying with the plan in the aspect of property legality, ownership, registered building space and structure, compensation standard, etc. In many cases, some residents even insist on an excessive compensation price, which is several times the market price. Because maintaining social stability is one top concern of all levels of government, plenty of time will be spent to achieve the final agreements and minimize the risk of social contradiction. As it is stated by interviewee L2: "*To resolve the issue, rounds of negotiation and coordination should be done with almost every dissatisfied property owner. However, most of them held a biased perception of the government. To improve their understanding of the government's works and persuade them to agree on the plan, many grass-rooted civil servants visit their home day by day. In many circumstances, the civil servants even contact the property owners' relatives and friends to help with the persuasion.*"

4.5.3 Imperfect Institution of Urban Renewal Decision-Making

Based on the findings, it can be clearly stated that the current institution of urban renewal decision making is imperfect. First, the first two stages and the last two are strictly separated. When the project plan (designated renewal area, time plan, renewal mode, financing arrangement, etc.) is made and approved, the related sectors must follow it, and continue developing a compensation plan for expropriation then try to reach an agreement with in-situ residents. In principle, there is no feedback loop between the second and third stages. Therefore, even if the last two stages do not go well (e.g., too many in-situ residents refuse to move out), all governmental sectors need to do is to push the agenda on the last two stages to reach a final agreement, even if it will cause tremendous transaction costs. Moreover, the strict separation of decision-making stages also creates a loophole for in-situ residents to obtain more benefits. Since there may be many projects being planned in the short term, it is possible to be a long time before the compensation plan is made in one renewal area. Thus, as D3 states it: "*To gain more compensation, in-situ residents may rush to construct unapproved buildings with low costs and low quality during the gap period, such as constructing one more floor on the old buildings*." It indirectly increases research costs and coordination/negotiation costs borne by the district government. Furthermore, the second and third stage both requires the investigation of buildings. The former investigates the physical condition, function, cultural value of the buildings, and the latter investigates the land/property right, building structure, and legality. The separation of stages also results in the separation of building investigation, thus generate more research costs.

Second, there is a lack of guidance on project planning, which arouses uncertainties and further induces transaction costs. Under current regulations, the purpose and elements of a project plan are clear to all stakeholder groups, but how to make the project plan is not explicit. Therefore, plan making is restricted by many aspects. Today, different types of urban renewal projects are initiated and led by different sectors in the district government. Each sector has its expertise and institution and requires consulting parties in a different background, such as urban development, industrial development, social management, spatial planning, etc. Nevertheless, most specific sectors or consultants are only specialized in their fields. Without a holistic view on urban renewal, it arouses uncertainties and further induces transaction costs, thus raising the risks of projects. Also, without clear guidance on how to make a project plan, the works of all stakeholder groups can only rely on the existing plans, policies, and specific requirements of various relevant sectors. These may pose more restrictions than instructions, or even contradict each other. It may generate lots of research costs and coordination/negotiation costs in project planning.

Third, there is a lack of a cross-sector cooperation mechanism, which is the primary cause of high-level coordination/negotiation costs. The urban renewal project plan is seen as the bottom-level plan; stakeholders have to comply with much high-level government planning, such as urban planning, land use planning, national economic and social development planning, etc. Moreover, in different sites, different sectors have their requirements and restrictions (e.g., cultural heritage, landscape, state-owned properties, etc.). In many circumstances, one sector may look for cooperation only when it needs supports, or others' works are against its requirements. When an issue involves many sectors, the cooperation may become more complicated and cause misunderstandings and conflicts. Thus, much time will be wasted on the coordination and negotiation activities in the whole process without a mature cross-sector cooperation mechanism.

4.5.4 Recommendations to Reduce Transaction Costs

Some policy implications are provided to reduce transaction costs identified above. First, it is of great importance for the district government to establish a specific approach of urban renewal planning to replace the current project planning. It provides strict guidelines on how to designate urban renewal areas and plan the renewal mode, time, financial arrangement, and other relevant elements (e.g., management, and post-maintenance). It introduces the detailed multi-disciplinary requirements of research and consultation work, including urban development, spatial planning, social management, cultural value assessment, building assessment, etc. to ensure the plan is made in a comprehensive view. Moreover, the approach clearly illustrates the relationships between this urban renewal planning and other related policies, planning, regulations, and requirements of specific sectors to reduce the restrictions in plan making.

To avoid the uneven distribution of transaction costs, it is suggested to abolish the strict separation of project planning and compensation planning and establishing a feedback loop in the whole decision-making process. Combining the second (project planning) and third stages (compensation planning), or even integrating compensation planning into urban renewal planning, can save much time and resources on building an investigation. In addition, it greatly reduces the gap period and avoids in-situ residents to build unapproved buildings for more compensation. Furthermore, it may also indirectly improve the quality of plan making, thus reduce the burden of district government and local administrative organizations in dealing with in-situ residents.

To reduce the high-level coordination/negotiation costs, governments can establish a cooperation mechanism for different participants (including in-situ residents). This implies a platform for all participants to cooperatively cope with complex problems in urban renewal, ensuring their expectations, knowledge, and information are well-considered and presented. Based on this cooperation mechanism, all relevant sectors in different levels of government, consulting parties, in-situ residents, and other organizations can know when and how to provide their information, knowledge, and resources. If necessary, establishing a leading sector to take responsibility for all relevant issues in urban renewal can also include in the mechanism. Taking two Asian counterparts, Hong Kong and Singapore as examples, most issues relevant to urban renewal are responsible by one sector (namely, the Urban Renewal Authority in Hong Kong, and Urban Redevelopment Authority in Singapore) (Law et al. , 2009). By setting up a focused authority, it will be much easier to coordinate with other participants and thus significantly reduce transaction costs.

4.6 Conclusions

The study reported in this paper adopts transaction costs theory to probe the decision-making process of urban renewal in Chongqing, China. It indicates that transaction costs theory appears fruitful to better understand the decision-making process in Chinese urban contexts, from New Institutional Economics perspective. This paper takes the central urban districts in Chongqing as the study area and identifies four main stages in urban renewal decision-making: the preparation stage, the project planning stage, the compensation planning stage, and the final agreement stage. This study focuses on the stakeholder groups of municipal government, district government, local administrative organizations, and the consulting parties, who are highly and actively involved in the administrative process. Based on the literature review, an analytical framework is established to identify and analyze transaction costs borne by different stakeholder groups in the whole decision-making process. The results show that there exist many transaction costs in the administrative process of urban renewal decision-making. The distribution is uneven in terms of different stages and stakeholder groups. Moreover, the negotiation/coordination costs account for the significant part of the total transaction costs. The primary cause of high-level transaction costs is the current institutions of urban renewal decision-making, including the strict separation of decision-making stages, the lack of guidance on project planning, and the lack of

cross-sector cooperation mechanism. To reduce transaction costs, it requires the abolishment of strict-separated stages, the establishment of a specific approach of urban renewal planning, a new cooperation mechanism, and a focused urban renewal authority.

By presenting an empirical study, this paper provides theoretical discussions on applying transaction costs theory in the urban renewal decision-making process. Accordingly, it presents policy implications to reduce transaction costs and tackle institutional problems in China. However, collecting data by interviewing individuals may bring about more subjective factors to the result. Moreover, focusing on stakeholder groups highly participating in administrative activities cannot fully evaluate the whole system. These need to be acknowledged, and it will be of benefit to combine more quantitative methods and explore a broader range of stakeholder groups in future studies.

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5 Strategies for Improving Urban Renewal Decision-Making in China

Submitted for review.

ABSTRACT Since the late 1970s, China has passed through 30 years of large-scale rapid urbanization progress. To meet the housing demands of urbanization, urban renewal has become one crucial approach. However, current urban renewal decision-making has resulted in many unintended problems, such as unequal and nontransparent process, the break of social networks, loss of urban culture. Therefore, this research aims to systematically determine the strategies for improving urban renewal decision-making in China. The Analytic Network Process (ANP) approach is employed in this research to provide a quantitative basis. First, based on the authors' previous research and literature review, the problems of current urban renewal decision-making in China and a list of strategies for solving the problems are identified. By adopting ANP, the priorities of the problems and the strategies are examined based on the data collected through a group meeting. Finally, the results are evaluated, and a strategic framework for solving the urban renewal decision-making problems is proposed accordingly. This research shows that the ANP is applicable in providing valuable insights for the improvement of urban renewal decision-making in China.

KEYWORDS Urban Renewal, Decision-Making, Problems, Strategies, Analytic Network Process

5.1 Introduction

Since the late 1970s, China has passed through 30 years of large-scale rapid urbanization progress. From 1978 to 2015, the urban population in China climbed from 172 million to 813 million, and the urbanization rate raised from 17.92% to 58.52% (NBS, 2019). Based on NorthamNortham (1979)'s urbanization curve in the next decade, plenty of rural population in China will move to urban areas at high speed. It is predicted that the urbanization rate will exceed 60% at the end of 2020, and reach 80% before 2030 (Li et al. , 2014, Yue et al. , 2013). The unprecedented urbanization brings the modernized urban life and more rigid demands of qualified housing. After the fast-paced urban development in previous decades, in many cities, new land development has to slow down due to the insufficient undeveloped urban land. In Shenzhen, there will be only 59 square kilometers of urban land available for development after 2020; In Shanghai, only 5% of urban land can be used for new development in the future (Yi, 2018). To sustain high-speed urban development and meet the rigid housing demand, the government has to promote the efficient utilization of existing public resources. Therefore, urban renewal is becoming a valuable option.

Urban renewal brings improvement in the existing urban areas, to cope with urban decay and achieve multiple socioeconomic goals (Adams and Hastings, 2001, Couch, 1990, Zheng et al. , 2014). In practice, there is no doubt that urban renewal has already become one of the core development strategies in numerous cities in China. It has made a significant contribution China's urban prosperity, enhances the habitability and economic competitiveness of cities. However, every coin has two sides. There are also many problems being occurred in the current urban renewal in China. It leads to the issues of unequal and nontransparent process, break of social networks, loss of urban culture, etc. (Yau and Chan, 2008, Zhuang et al. , 2017). Many studies indicate that how the decisions were made is one of the major causes of the above problems (Juan et al. , 2010, Maginn, 2007, Mayer et al. , 2005, Wang et al. , 2014). To face the problems, as it is indicated by CSUS (2019), urban renewal in China has stepped into the new stage, changing from the old mode of only focusing on the physical redevelopment, to the new mode of considering more social factors such as participatory methods, social management, etc. Besides, according to the urban renewal policies issued by the national government in recent years, exploring participatory decision-making mechanisms in urban renewal by considering Chinese characteristics is an effective step to meet the demands in the new era (CCCPC and SC, 2016, MLR, 2016). However, to achieve the goal in practice, it requires a comprehensive evaluation of current urban renewal decision-making problems and proposes sets of targeted strategies (Yi, 2018, Zhou et al. , 2017, Zhuang et al. , 2019).

Although there are increasing studies on urban renewal in China, little research has systematically explored the strategies to solve current problems and improve urban renewal decision-making in China. Thus, this paper aims at conducting this systematic exploration. It answers the following research questions: What are the current problems of urban renewal decision-making in China? What are the possible strategies to solve the problems? Moreover, what are the priority strategies comparing to others? This paper is structured as follows. First, based on the authors' previous research and literature review, it lists the current problems of urban renewal decision-making in China and the list of strategies for tackling the problems. Then, it describes the method of Analytic Network Process, data collection, and result verification. Following this, it analyzes the identified problems and strategies and provides the proprieties of them. Based on this, the results are analyzed, and a strategic framework is proposed. Finally, the conclusion is presented.

5.2 Analysis of Urban Renewal Decision-Making in China: Problems and Proposed Strategies

5.2.1 Key Elements of Participatory Decision Making

"stakeholder participation" is emphasized in numerous governmental policy documents to address public issues, around the world (O'Faircheallaigh, 2010). Fair processes and transparent involvement is recognized as fundamental success factors of stakeholder participation (Prager and Nagel, 2008). Arnstein (1969) proposed a "ladder of participation" to depict the level of public involvement. It indicates that there are various participation approaches and degrees in public issues. Today, although there are increasing studies about stakeholder participation, there is still no broad consensus about the standard stakeholder participation approach in the decision-making of public issues (Harris et al. , 2016, Korfmacher, 2001, Purvis et al. , 2015).

Participatory decision making is a practice of sharing power among different stakeholders and empowering them to partake in the decision-making process (Carmeli et al. , 2009). It is associated with substantial interaction among

stakeholders (Whitney, 1994). In the field of public politics, Renn et al. (1993) presented a conceptual model for participatory decision making. The model integrates multi-stakeholder, multi-value, and multi-interest dimensions into practical decision making. Ananda (2007) implements participatory decision-making in forest land-use policy by using the Analytic Hierarchy Process to incorporates stakeholder preferences. Prager and Nagel (2008) explore participatory decision making on agri-environmental programs by applying an interactive PC-based model and the facilitation of the corresponding communication process.

To conclude from the literature, there are three key elements in the participatory decision-making process. The first is the stakeholders, whose capacities and attitudes are strongly related to their roles and functions in decision-making. The second is the process. It determines how a decision can be made through defined approaches and procedures. The third is the legislation, which defines legal criteria, standards, and guidance for stakeholder participation in the decision-making process.

5.2.2 Current Problems of Urban Renewal Decision-Making in China

Urban renewal is a multi-disciplinary public project, and the urban renewal decision-making process is complicated and involved by various stakeholders (Jiang et al. , 2012, Tang, 2015, Zhuang, Qian, 2019). Therefore, the key elements of participatory decision making can also be observed in urban renewal decision-making in the Chinese context. Based on authors' previous research, literature review, and above key elements of participatory decision-making, there are four major problems in current urban renewal decision-making being concluded: stakeholder capacity, stakeholder perceptions, process, and legislation (Lai and Tang, 2016, Yi et al. , 2017, Zhai and Ng, 2009, Zhou, Zhou, 2017, Zhuang et al. , 2020, Zhuang, Qian, 2019).

The problem of stakeholder capacity refers that some stakeholder groups fail to play their role in involving urban renewal decision-making. In China, there are various stakeholders involved in the urban renewal decision-making process, including different levels of government, consulting parties, the public, and other organizations such as financial institutions, land-related organizations, etc. (Zhuang, Qian, 2019). The government holds strong discourse power in urban renewal decision-making, but in practice, there exists a complex cooperation network among dozens of governmental sectors in three administrative levels in the urban renewal decision-making process (Zhuang, Qian, 2020, Zhuang, Qian, 2019). They can exert significant influence in different aspects (e.g., housing management, urban planning), but none of them can be fully responsible for the project's success.

In terms of consulting parties, in theory, their opinions are a critical basis for government sectors. However, in practice, their influence is not strong, and they are seldom responsible for the outcomes (Zhuang, Qian, 2019). Most of them are only specialized in their own expertise (e.g. spatil planning, building quality, etc.) and not able to keep a holistic view of the project (Zhuang, Qian, 2019). Local administrative organizations are mainly responsible for the groundwork (e.g., field investigation) to support the work of the district government. They conduct groundwork (e.g. negotiation with in-situ residents) and can directly obtain the grass-rooted information, but their discourse power is weak in the decision-making process. They do not have enough experts and civil servants to support urban renewal. Therefore, under the current institution, the contribution of local administrative organizations is ineffective and inefficient (Zhuang, Qian, 2020, Zhuang, Qian, 2019). In terms of NGOs and the public, their roles in urban renewal decision-making are minor and limited. It lacks formal participation channels for these stakeholders to take the initiative in urban renewal decision-making, which increases the risks of social conflicts (Zhuang, Qian, 2019).

The problem of stakeholder perceptions refers that different stakeholders hold diverse perceptions when cooperating in urban renewal decision-making, which affects the efficiency or even creates conflicts. When involving in urban renewal decision-making, there exists strong distrust or disrespect among different stakeholders, especially different stakeholder groups (Zhuang, Qian, 2017). Moreover, there exist negative perceptions of public participation (Zhuang, Qian, 2019). It means that there are few stakeholders in urban renewal decision-making, believing the added values of public participation. Furthermore, the understandings of public interests are diverse between each other (Zhuang, Qian, 2017). It causes misunderstanding between the in-situ residents and authorities, thus pose more barriers for active participation and cooperation.

The third major problem is the *process* problem, which means that there are drawbacks or even loopholes in the current process, affecting the efficiency and effect of decision-making. In China, the urban renewal decision-making is a complicated process which not just simply decides whether to do the project or not, but also considers the macro urban development, living environment, timing, mode, social risks, compensation, etc. (Jiang, Zhang, 2012, Tang, 2015, Zhuang, Qian, 2019). During the decision-making process, to guarantee future investment in the renewal area, government sectors may establish informal relationships with developers in some cases (Zhuang, Qian, 2019). However, this informal involvement may also result in developers' subsequent engagement in urban planning, land expropriation, etc., which may violate the interests of the public. Moreover, In the current decision-making process, the stages of project planning and compensation

planning are strictly separated (Zhuang, Qian, 2020). There is no feedback loop between those two stages. Also, it provides loopholes for in-situ residents to gain more economic benefits by rushing to construct more buildings with low costs and quality. Furthermore, the current urban renewal decision-making process requires complex communication, cooperation, and agreements between a wide range of stakeholders. Thus, there is a tremendous amount of time and resources being wasted in coordination and negotiation works between stakeholders (Zhuang, Qian, 2020). In addition, the in-situ residents only participated in the late stage (Lai and Tang, 2016, Zhai and Ng, 2009, Zhou, Zhou, 2017, Zhuang, Qian, 2020). Since their missing role in the project plan and compensation plan making, it creates many more barriers to build positive communication between government and in-situ residents at the end, thus increases the difficulty for reaching final agreements.

The legislation problem is the fourth major problem of urban renewal decision-making. It means that it lacks effective laws, regulations, and specific mechanisms to support urban renewal decision-making in China. The legislation problem is reflected in three aspects. First, it lacks guidance on the planning of urban renewal projects (Yi, Liu, 2017, Zhuang, Qian, 2020). In most Chinese cities, the specific standards of critical factors in decision-making, such as urban development, land use, social environment, etc. is lacking in current laws or regulations. Moreover, the planning process and approach are not explicit. Second, it lacks post evaluation and accountability mechanisms (Yi, Liu, 2017, Zhuang, Qian, 2019). Thus, the stakeholders with strong discourse power are not much affected by the outcomes of their decision. The other stakeholders have few influences on the decision but bear much of the adverse outcomes. Third, it lacks participation and cooperation mechanism (Yi, Liu, 2017, Zhuang, Qian, 2020, Zhuang, Qian, 2019). The functions of each stakeholder are not well-defined when cooperating in the decision-making process. Thus, in many cases, one stakeholder may try to cooperate with others only when it needs support, or its interests are threatened.

5.2.3 Strategies for Dealing with Problems in Current Urban Renewal Decision-Making in China

It can be found that each major problem of urban renewal decision-making is reflected in several dimensions. It means that the problem is not only severe but also complicated. To address the complicated issues of current urban renewal decision-making, it requires the authority to develop strategies to improve the current institution, administration, organizational structure, and activities, etc. Based on the authors' previous research and literature review, nine proposed strategies are concluded below.

First, it requires the establishment of specific supporting laws and regulations for urban renewal decision-making (Yi, Liu, 2017, Zhuang, Qian, 2017, Zhuang, Qian, 2019). It defines the detailed boundary of public interests and provides explicit provisions on the detailed decision-making process and approaches, as well as the powers, functions, and obligations of different stakeholders. Second, it requires the establishment of a specific urban renewal planning approach (Zhuang, Qian, 2020). It provides strict guidelines on how to designate urban renewal areas, plan renewal mode, financial arrangement, time, etc. The urban renewal planning approach introduces the detailed multi-disciplinary decision basis and standards of research and consultation work. It is incorporated into the urban planning system. Third, a specialized urban renewal authority needs to be set up (Zhuang, Qian, 2020, Zhuang, Qian, 2019). It takes over the major works about urban renewal governed by other governmental sectors. Its functions include conducting relevant research, initiating urban renewal projects, leading and coordinating other sectors, developing urban renewal plans, etc. Fourth, an effective cooperation mechanism in the administrative process needs to be established (Zhou, Zhou, 2017, Zhuang, Qian, 2017). It guides how different government sectors at all administrative levels, consulting parties, and other relevant organizations can cooperate in the participatory decision-making process. Fifth, the current decision-making process needs to be simplified and include strengthened post evaluation (Zhuang, Qian, 2020). The simplification of the decision-making process requires the combination of complicated stages and the reduction of feedback loops. Moreover, the post-evaluation should be included and strengthened in the decision-making process to enhance the responsibility of relevant stakeholders. Sixth, platforms for public participation in decision-making need to be set up (Lai and Tang, 2016, Yi, Liu, 2017, Zhai and Ng, 2009, Zhuang, Qian, 2020). It can transparently deliver the official information to the public, effectively collect public opinions, and support the relevant investigation. Seventh, market power needs to be formally included in the decision-making process (Zhuang, Qian, 2019). The formal involvement of developers should be well regulated to strictly define the boundary of the market power and restrict its excessive engagement in some works, such as compensation planning. Eighth, the discourse power of local stakeholders in decision-making need to be strengthened (Lai and Tang, 2016, Zhai and Ng, 2009, Zhuang, Qian, 2019). These local stakeholders include the local administrative organizations, NGOs, and the public. Finally, publicity and education of participatory urban renewal decision-making need to be promoted (Yi, Liu, 2017, Zhuang, Qian, 2017). It is a long-term strategy to improve the awareness of stakeholders. It aims at changing their negative perception of public participation and improves their willingness and skills of participation.

5.3 Research Methodology

5.3.1 Analytical Network Process

Analytical Network Process (ANP) is developed from the Analytical Hierarchy Process (AHP) (Saaty, 1996, Saaty, 2014). The AHP is based on a linear top-down structure, and all the factors in the structure are assumed to be independent. Since in the real world, many issues are structured nonlinearly, and the factors inside are independent, ANP is always adopted to structure the models of complex problems (Aragonés-Beltrán et al. , 2010, Liu et al. , 2018). For a complex issue, it can be converted into a hierarchical structure by dividing the issue into several sub-issues. Each level in the hierarchy denotes a group of factors related to each sub-issue. The factors in one cluster can influence some or all factors in other clusters. The ANP allows for the interdependent relationships among all the factors, thus to rank the factors and alternative strategies by considering the above interrelationships (Chung et al. , 2005, Hamza, 2006).

There are several reasons for adopting ANP in this research: First, the problems of urban renewal decision-making in China is complex and reflects in many aspects. Second, there exist dependencies among the identified problems and some sub-problems. Finally, to better address the problems, it is needed to identify the priority of all the possible strategies. By adopting this approach, it helps to improve the understanding of the urban renewal decision-making problems in China and make a reliable set of strategies to deal with the problems.

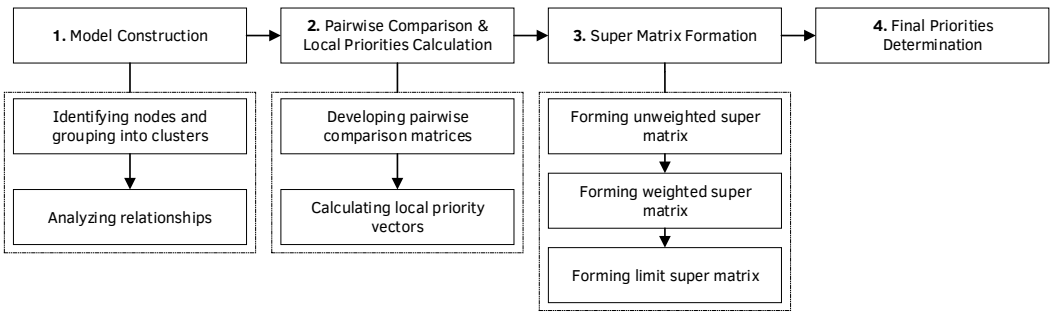

FIG. 5.1 Summary of ANP Steps

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The ANP comprises four major steps (Xu et al. , 2015). The summary of ANP steps is shown in Figure 5.1. The first step is model construction. It aims to identify all the components (clusters) of the goal, elements (nodes) of each component, and the relationships between the elements. Precisely, this can be divided into two basic sub-steps. First, all the nodes, including problems, sub-problems, and strategies, need to be identified and grouped into different clusters based on their characteristic features. Second, the relationships between each node, no matter inside or outside the corresponding cluster, should be analyzed.

The second step is conducting pairwise comparisons and calculating local priority vectors. It compares the nodes pariwaisely in regard to the influence of one node to the others, thus determining which element is relatively more important and the importance degree. The comparison is based on the constructed ANP model and reflected in pairwise comparison matrices. In pairwise comparison matrices, a scale of 1 to 9 is used to determine the relative importance values between one pair of elements, whereby 1 means equal importance between two elements, and 9 indicates the extreme importance of one element compared to another one. The reciprocal value $a_{ij} = 1/a_{ji}$ is used in the inverse comparison, where a_{ij} denotes the importance value of the ith element compared with jth element. Then, local priority vectors for each pairwise comparison matrix are calculated through the eigenvector method to quantify the relative importance degree of all elements in each matrix. In addition, to test whether the result of each pairwise comparison is acceptable, a consistency ratio (CR) is employed. If the value of CR is less than 0.1, it means that the result can be accepted.

The third step is the supermatrix formation. In the ANP model, there are three types of supermatrix: unweighted supermatrix, weighted supermatrix, and the limit supermatrix. Formatting above three matrices can be seen as three sub-steps. First, to form unweighted supermatrix, all the local priorities calculated from pairwise comparisons are appropriately combined into a partitioned matrix. Second, the weighted supermatrix is gained by multiplying all elements in a component of the unweighted supermatrix by the corresponding cluster weight matrix. Thus, the values of all elements in each column can add up to 1. Third, the limit supermatrix is calculated through infinite multiplication. The multiplication will be halted when the values of one column are the same as every other column. The equation is shown below, where W_l is the limit supermatrix, W is the weighted supermatrix, N means the sequence, and k denotes the exponent determined by iteration.

The final step is determining the final priorities. According to the supermatrix formation, the final result of ANP can be calculated. The priorities of problems and sub-problems in each cluster can be obtained in the corresponding columns in

the limit supermatrix. Then, final calculations will be made for gaining the overall priorities of the proposed strategies based on the overall priorities of each sub-problem and the local priorities of all strategies targeting each sub-problem.

5.3.2 Data Collection and Result Verification

At first, a questionnaire survey was designed and addressed to the experts representing different key stakeholders to collect the required data for ANP. The questionnaires were distributed through E-mail and via personal delivery. However, the outcomes are invalid because when imputing the mean scores of pairwise comparisons, most of the CRs are more than 0.1. Based on our evaluation, in this explorative research, there are two major causes of the failure of data collection. First, since urban renewal decision-making is multi-disciplinary and participated by dozens of stakeholders, it should be noted that most of the individuals only involved in specific parts of the decision-making process rather than the whole from the beginning to the end. It is hard to guarantee that the targeted respondents can hold a holistic view of urban renewal decision-making. Second, the understandings of pairwise comparison are also diverse from one respondent to another. In the questionnaire, there are plenty of comparisons to score. One respondent may be unsure about the meaning of some comparisons without authors' confirmation.

Based on Jharkharia and Shankar (2007), employing group meetings can maximally avoid bias. Through a group meeting, the interviewees can provide more insightful information. Therefore, to overcome the drawbacks of the questionnaire survey, a group meeting was conducted for ANP data collection in this research. The targeted interviewees in group meeting were selected based on the following principles: (1) They represent one of the key stakeholders; (2) They have the rich practical experience and sufficient knowledge in urban renewal decision-making; (3) At least half of them have a holistic view on urban renewal decision-making. Since it is difficult to invite every stakeholder to join the group meeting, finally, seven individuals representing the key stakeholder groups were approached. The representatives include government officials in the municipal, district, and local administrative level, consultants (researchers), and a citizen, etc. The details of the interviewees are shown in Table 5.1.

The group meeting consists of two parts. The first part is to verify the preliminary ANP model made by authors and clarify the relationships between the elements. The second part is to determine to what extent each element has impacts on the others to which it is related based on the verified ANP model. The two-step questions

were designed for each comparison. A sample is shown below: "*Comparing the problems "Process" and "Legislation" according to their influence upon the problem "Stakeholder Capacity", which has greater influence? Scoring from 1 to 9, 1 means equal and 9 means extreme, which number can represent the level of the greater influence?"* After all the comparison questions were answered, the answers were translated into the corresponding pairwise comparison matrices. Then, Super Decisions software was used to process the data.

When the ANP approach was finished, a strategic framework for solving the current urban renewal decision-making was proposed by authors. Six interviews were conducted to verify the results of model calculation and the proposed strategic framework. The details of the interviewees are shown in Table 5.1.

TABLE 5.1 The Profiles of Professionals

Group	Role	The function of Department and Qualification	Participation
Municipal Government	Officer	Working in Commission of Urban-Rural Development; Over 15 years' experience in urban renewal projects	I
District Government	Officer	Working in Bureau of Urban Planning; Urban planning specialist, more than 15 years' working experience	GM, I
District Government	Vice Director	Working in Bureau of Housing Management; Over 20 years' working experience in housing expropriation	GM
Local Administrative Organization	Director	Working in Neighborhood Committee; specialist of grass-roots work in urban renewal projects	GM
Local Administrative Organization	Officer	Working in Neighborhood Committee; specialist of grass-roots work in urban renewal projects	GM
Consulting Parties	Professor	Working in a university; Over 15 years' research and practical experience in urban renewal projects	GM, I
Consulting Parties	Researcher	PhD candidate in a university; rich research experience in urban renewal projects	GM, I
Consulting Parties	Professor	Working in a university; Over 10 years' research and practical experience in urban renewal	I
Consulting Parties	Professor	Working in a university; Over 10 years of research and practical experience in urban renewal and urban planning	I
Public	Citizen	The general public, who has experience in participating in urban renewal projects	GM

Note: GM = Group Meeting; I = Interview

5.4 Model Calculation

5.4.1 Model of ANP

TABLE 5.2 Summary of Problems and Sub-Problems of Current Urban Renewal Decision-Making in China

1. Stakeholder Capacity	2. Process
SC1. Complex network in governmental sectors	P1. The informal involvement of market power
SC2. Limitation of influence and expertise of consulting parties	P2. The fragmentation of decision-making stages
SC3. Limitation of influence and expertise of local administrative organizations	P3. Huge waste of time and resources in coordination and negotiation works between stakeholders
SC4. The missing roles of NGOs and the public	P4. Exclusion of in-situ residents' participation in the early decision-making stage
3. Legislation	4. Stakeholder Perceptions
L1. The lack of guidance on the planning of urban renewal projects	SP1. Distrust among stakeholders
L2. The lack of post-evaluation and accountability mechanism	SP2. Negative perceptions of public participation
L3. The lack of participation and cooperation mechanism	SP3. Different understandings of public interests

Sources: (Lai and Tang, 2016, Yi, Liu, 2017, Zhai and Ng, 2009, Zhou, Zhou, 2017, Zhuang, Qian, 2020, Zhuang, Qian, 2019)

TABLE 5.3 Strategies for Solving the Problems of Urban Renewal Decision-Making in china

Code	Strategies
St-1	Establishing specific supporting laws and regulations for urban renewal decision-making
St-2	Establishing specific urban renewal planning approach
St-3	Setting up a specialized urban renewal authority
St-4	Establishing effective cooperation mechanism in the administrative process
St-5	Simplifying the decision-making process and strengthening post evaluation
St-6	Setting up platforms for public participation in decision-making
St-7	Formally including market power in the decision-making process
St-8	Strengthening the discourse power of local stakeholders in decision-making
St-9	Promoting publicity and education of participatory urban renewal decision-making

Sources: (Lai and Tang, 2016, Yi, Liu, 2017, Zhai and Ng, 2009, Zhou, Zhou, 2017, Zhuang, Qian, 2017, 2020, Zhuang, Qian, 2019)

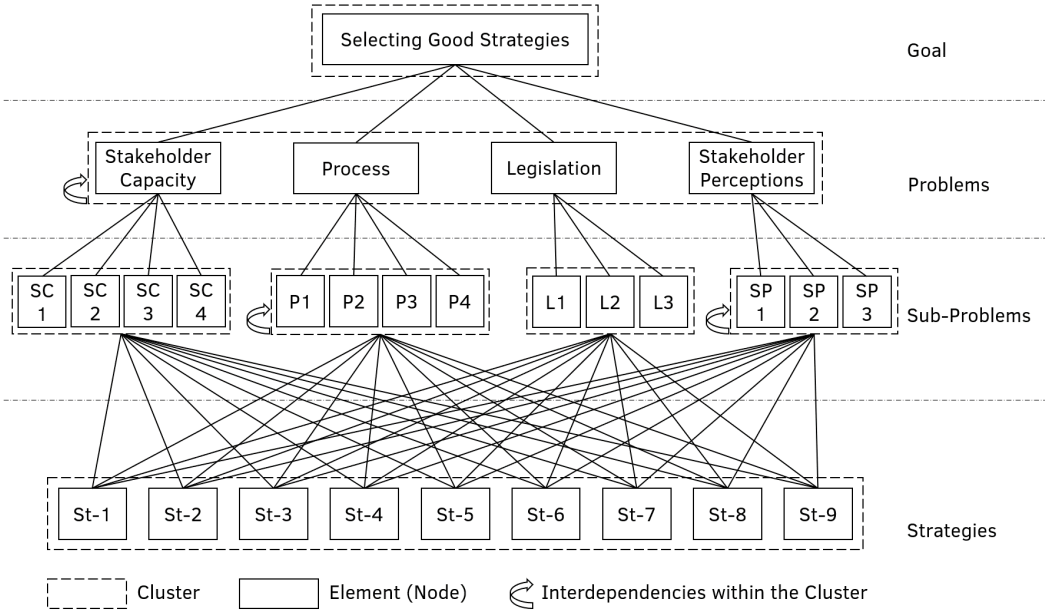

FIG. 5.2 Structure of the Developed ANP Model

According to the authors' previous research and literature review, the problems and sub-problems of current urban renewal decision-making in China are concluded and listed in Table 5.2. The proposed strategies to deal with current problems are listed in Table 5.3.

Based on the lists of decision-making problems and proposed strategies, through the verification in the group meeting, the ANP model is constructed as below, which is shown in Figure 5.2. The aim of "selecting good strategies" is placed at the top level of ANP model, and the four identified problems of urban renewal decision-making are in the second level. The sub-problems in the third level, including four sub-problems for the stakeholder capacity problem, four sub-problems for the process problem, three sub-problems for the legislation problem, and three sub-problems for the stakeholder perception problem. Nine strategies developed for solving the problems of urban renewal decision-making are placed at the bottom level of the model. It should be noted that there exists interdependencies within three clusters: four problems, sub-problems for process problem, and sub-problems for stakeholder perceptions problem. In the second level, for example, lacking relevant legislation may increase unfair and inefficient problems in the process; the too large gap of stakeholder discourse power (capacity) may also pose negative

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stakeholder perceptions towards each other. In the third level of ANP, under the problem of process and stakeholder perceptions, one sub-problem is very likely to exert influence on the others. For instance, the fragmentation of decision-making stages is strongly related to a huge waste of time and resources in coordination and negotiation works between stakeholders (Zhuang, Qian, 2020); and the distrust among stakeholders also increases the negative perceptions of public participation.

5.4.2 Pairwise Comparison

According to the ANP model developed above, there are five comparison matrices related to four problems in the second level of ANP. One matrix involves four problems for the holistic view, and the other four considers the interdependence within the problems. The relative importance of each problem concerning different dimensions, is compared respectively. These comparison matrixes and the local priorities are shown in Table 5.4 to 5.8.

In terms of the sub-problems in the third level and strategies at the bottom level of ANP model, a series of pairwise comparisons were also carried out following the above procedure. All the relevant data of local priorities calculated through each pairwise comparison matrix will be entered into the unweighted supermatrix.

TABLE 5.4 Pairwise Comparison Matrix among the problems concerning the holistic view

Problems	Stakeholder Capacity	Process	Legislation	Stakeholder Perceptions	Local Priority
Stakeholder Capacity	1	1/3	1/3	2	0.1501
Process		1	1	3	0.3722
Legislation			1	3	0.3722
Stakeholder Perceptions				1	0.1056

CR=0.02271

TABLE 5.5 Pairwise Comparison Matrix among the problems concerning the "Stakeholder Capacity"

Stakeholder Capacity	Process	Legislation	Stakeholder Perceptions	Local Priority
Process	1	1/2	3	0.3090
Legislation		1	5	0.5816
Stakeholder Perceptions			1	0.1095

CR=0.00355

TABLE 5.6 Pairwise Comparison Matrix among the problems concerning the "Process"

Process	Stakeholder Capacity	Legislation	Stakeholder Perceptions	Local Priority
Stakeholder Capacity	1	1/3	3	0.2583
Legislation		1	5	0.6370
Stakeholder Perceptions			1	0.1047

CR=0.03703

TABLE 5.7 Pairwise Comparison Matrix among the problems concerning the "Legislation"

Legislation	Stakeholder Capacity	Process	Stakeholder Perceptions	Local Priority
Stakeholder Capacity	1	1	3	0.4286
Process		1	3	0.4286
Stakeholder Perceptions			1	0.1429

CR=0.00000

TABLE 5.8 Pairwise Comparison Matrix among the problems with respect to the "Stakeholder Perceptions"

Stakeholder Perceptions	Stakeholder Capacity	Process	Legislation	Priority
Stakeholder Capacity	1	1/3	1/4	0.1220
Process		1	1/2	0.3196
Legislation			1	0.5584

CR=0.01759

5.4.3 Priorities of the Elements

Based on the results of pairwise comparison, the unweighted supermatrix is developed. The weighted supermatrix is calculated accordingly, finally to get the limited supermatrix. Based on the limited supermatrix, the final priorities of problems and sub-problems are calculated, which is shown in Table 5.9. From the table, legislation is observed as the biggest problem comparing to the other three major problems. Two sub-problems "L3: The lack of participation and cooperation mechanism" and "L1: The lack of guidance on the planning of urban renewal projects" rank the top two among all other sub-problems. Following these, "SC1: Complex network in governmental sectors" under the problem of stakeholder capacity is the third severe sub-problems. "P2: The fragmentation of decision-making stages" and "P3: Huge waste of time and resources in coordination and negotiation work between stakeholders" under the problem of process rank the fourth and fifth, respectively.

TABLE 5.9 Overall Priorities of Sub-Problems of Urban Renewal Decision-Making

Problems	Limited Matrix	Priority of the problems	Sub-problems	Limited Matrix	Priority of the sub-problems	Overall priority of the sub-problems	Rank
Stakeholder Capacity	0.00044	0.2431	SC1	0.00019	0.4318	0.1050	**3**
			SC2	0.00010	0.2273	0.0552	8
			SC3	0.00005	0.1136	0.0276	13
			SC4	0.00010	0.2273	0.0552	8
Process	0.00049	0.2707	P1	0.03255	0.0916	0.0248	14
			P2	0.11474	0.3229	0.0874	**4**
			P3	0.11063	0.3114	0.0843	**5**
			P4	0.09737	0.2741	0.0742	6
Legislation	0.00068	0.3757	L1	0.00021	0.3088	0.1160	**2**
			L2	0.00013	0.1912	0.0718	7
			L3	0.00034	0.5000	0.1878	**1**
Stakeholder Perceptions	0.00020	0.1105	SP1	0.06107	0.4287	0.0474	10
			SP2	0.04070	0.2857	0.0316	11
			SP3	0.04069	0.2856	0.0316	12

TABLE 5.10 Final Priorities of Strategies

	SC1	SC2	SC3	SC4	P1	P2	P3	P4	L1	L2	L3	SP1	SP2	SP3	Total	Rank
St-1	0.1414	0.1622	0.1222	0.0824	0.2149	0.0651	0.0730	0.0655	0.2531	0.3116	0.2220	0.1187	0.0920	0.3473	0.1667	**2**
St-2	0.0941	0.4006	0.0228	0.0260	0.0976	0.0651	0.0397	0.0293	0.5129	0.0690	0.0563	0.0213	0.0410	0.0898	0.1279	**3**
St-3	0.3059	0.0180	0.0337	0.0158	0.0423	0.1866	0.3553	0.0206	0.0334	0.0383	0.1349	0.0526	0.0182	0.0218	0.1195	**5**
St-4	0.2816	0.1736	0.1427	0.0782	0.0782	0.1168	0.2609	0.0634	0.0334	0.0339	0.4212	0.1851	0.0392	0.0924	0.1846	**1**
St-5	0.0878	0.0870	0.0637	0.0418	0.0390	0.4875	0.1368	0.1894	0.0334	0.2407	0.0756	0.0204	0.0269	0.0418	0.1258	**4**
St-6	0.0180	0.0443	0.0210	0.3284	0.0186	0.0198	0.0456	0.4573	0.0334	0.1360	0.0225	0.2776	0.3456	0.1689	0.1103	6
St-7	0.0180	0.0381	0.0210	0.0164	0.4724	0.0198	0.0163	0.0155	0.0334	0.0241	0.0225	0.0201	0.0168	0.0224	0.0335	9
St-8	0.0180	0.0381	0.4485	0.3284	0.0186	0.0198	0.0310	0.0989	0.0334	0.1189	0.0225	0.1933	0.2056	0.0380	0.0802	7
St-9	0.0352	0.0381	0.1244	0.0824	0.0186	0.0198	0.0415	0.0602	0.0334	0.0274	0.0225	0.1111	0.2148	0.1777	0.0517	8

Also, based on the result of the limited supermatrix and the overall priorities of sub-problems, the priorities of all proposed strategies targeting each sub-problem and the final priorities of strategies are calculated, which is shown in Table 5.10. The top one strategy is "St-4: Establishing effective cooperation mechanism in the administrative process". It is followed by "St-1: Establishing specific supporting laws and regulations for urban renewal decision-making", "St-2: Establishing specific urban renewal planning approach", "St-5: Simplifying decision-making process and strengthening post evaluation", which rank the second to fourth, and "St-3: Setting up a specialized urban renewal authority".

5.5 Results Analysis and Strategic Framework Establishment

5.5.1 Analysis of Urban Renewal Decision-Making Problems

5.5.1.1 The Lack of Laws and Regulations

By adopting the ANP approach, this research demonstrates that the legislation problem is the biggest in current urban renewal decision-making. It is in line with many public policies and projects, whose success is firmly based on the complete legal system (Acs and Szerb, 2007, Von Bogdandy et al. , 2010). Lacking relevant laws and regulations also bring a negative impact on the decision-making process, stakeholders' capacity, and perceptions, thus add to the whole decision-making problems and pose many challenges for dealing with them.

The legislation problem is mainly reflected in two dimensions, which are also the top two sub-problems of the whole. The one is the lack of active participation and cooperation mechanism. In current urban renewal decision-making, there is no mature and efficient mechanism for stakeholders to participate in offering their information/knowledge and expressing their demands (Yi, Liu, 2017, Zhuang, Qian, 2020) efficiently. The functions of each stakeholder are not well-defined when cooperating in the decision-making process. In most cases, one stakeholder may try to cooperate with others only when it needs support, or its interests are threatened (Zhuang, Qian, 2019). When it involves too many stakeholders, such as many government sectors, this cooperation may become very inefficient and ineffective.

The other dimension of legislation problem is the lack of guidance on urban renewal planning. Today, the detailed guidance on how to make urban renewal project planning in the decision-making process is still missing in most Chinese cities (Yi, Liu, 2017, Zhuang, Qian, 2020). The specific standards of critical factors in decision-making, such as urban development, industrial development, land use, social environment, etc. is lacking in current laws or regulations. The planning process and approach are not explicit. All relevant stakeholders play their roles only based on the existing planning (e.g., urban planning), policies, requirements of other government

sectors, and their own experience. However, these act more as restrictions rather than instructions, especially when there exist contradictions in between.

5.5.1.2 The Complexity of Administrative Organizational Structure

It has been mentioned in many research that the government in China holds the dominant power in public projects and policies, which brings about a high level of efficiency (He and Tian, 2008, Li et al. , 2012a). However, such efficiency is affected by diverse sectors at different governmental levels. Based on ANP, it is figured that the complex network in governmental sectors is the third most significant sub-problem of decision-making. There are dozens of governmental sectors in three administrative levels participating in the urban renewal decision-making process, which forms a complex network (Zhuang, Qian, 2019). Different sectors have strong discourse power in fields of urban planning, housing management, land use management, urban development, etc. respectively. They have their expertise and requirements. It requires close cooperation of all relevant sectors, but none of them can play the leading role to hold all the cards and be fully responsible for project success. This phenomenon increases the risks of project failure.

5.5.1.3 The Drawbacks of Decision-Making Process

Based on the ANP results, under the major problem of *process,* two sub-problems ranking the fourth and fifth of the whole, which are the fragmentation of decision-making stages and the huge waste of time and resources in coordination and negotiation work between stakeholders. Moreover, the former can raise the level of the latter to a certain extent.

The fragmentation refers that in the current urban renewal decision-making process, where the stages of project planning and compensation planning are strictly separated (Zhuang, Qian, 2020). The quality of project planning is strongly related to the effects of compensation planning. However, when the project plan is approved, all relevant sectors should follow it and develop a compensation plan accordingly. If the in-situ residents disagree with the project, there is no feedback loop for redeveloping the project plan. What government sectors can only do is to keep persuading residents to agree with the compensation plan. Furthermore, such strict separation provides loopholes for in-situ residents to gain more economic benefits (Zhuang, Qian, 2020). If the gap between project planning and compensation planning is too

long, when the project plan is made and known by the public, in-situ residents may rush to construct more unauthorized buildings with low costs and quality to get more compensation. It wastes a lot of time and resources to conduct the investigation and pay the unplanned prices.

The huge waste of time and resources in coordination and negotiation works in the decision-making process are raised in two aspects. One is that there are many agreements to be made among dozens of sectors inside the government (Zhuang, Qian, 2020). The other one is that, in each project, it involves several consulting parties who need to build communication with more than one government sector (Zhuang, Qian, 2020). All the above require tremendous time and resources for every relevant stakeholder on coordinating and negotiating with many others to build mutual trust, clarify the requirements, discuss the works, etc.

5.5.1.4 The Discussion of Public-Related Problems

In much research, it has been highlighted that the ignorance of public interests and the lack of public involvement in public projects are the major causes of project failure (Enserink and Koppenjan, 2007, Li, Ng, 2012a, Li et al. , 2012b). In many western countries, empowering the public and deepening their involvement and are seen as the core of public projects (Brabham, 2012, Haffner and Elsinga, 2009). Therefore, pubic-related problems are also considered as the key problems of public projects in the Chinese context (Tang et al. , 2008, Zhang and Fang, 2004). However, in this research, the public-related sub-problems (SC4, SP2, and SP3) are relatively small issues comparing to other sub-problems. Although it does not mean that these sub-problems are not important, it represents that solving these problems is not the top priority.

5.5.2 The Strategic Framework for Solving the Problems

Based on the final results of ANP, it can be observed that the top five priorities of the strategies account for more than 70% of the whole. Therefore, these can be embodied into a strategic framework for the authority to deal with complicated problems, thus to propose a set of right strategies that are not only essential but also in urgent need. The strategic framework is shown in Figure 5.3. In the proposed strategic framework, the supportive legal environment plays the role of the foundation, which provides specific laws and regulations for the other three

components. It strengthens accountability to guarantee the establishment and implementation of the other three components. The improved organizational structure and cooperation mechanism provides a systematic solution for the problems raised by a large number of sectors, organizations, and individuals. The detailed urban renewal planning approach introduces the idea of urban renewal planning and provides guidance, series of standards, and criteria to formalize the implementation of urban renewal planning in detail. The optimized decision-making process is based on the improvement of the current decision-making process by combining complicated stages and reducing overlapped works. Moreover, these three components can supplement each other in different aspects.

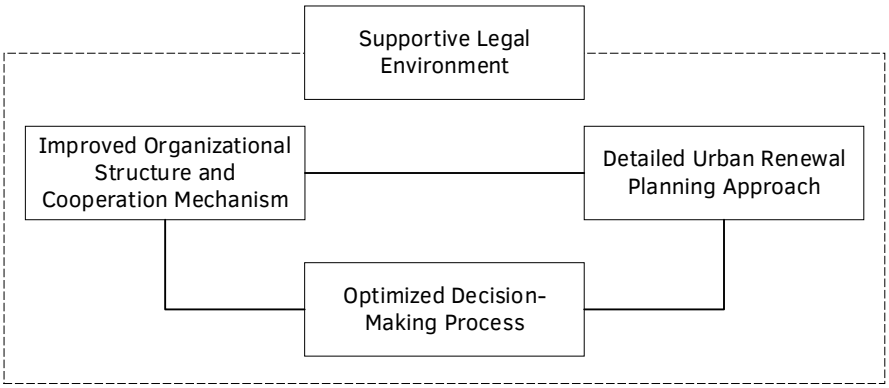

FIG. 5.3 Strategic Framework for Solving the Problems of Urban Renewal Decision-Making

5.5.2.1 Supportive Legal Environment

Based on the result of this research, establishing specific supporting laws and regulations is strongly related to the solution of many sub-problems. It represents a supportive legal environment about urban renewal decision-making is the foundation of the proposed set of strategies. The supportive legal environment is based on a legal system consisting of a series of urban-renewal-related laws and regulations that provide legal guidance for the decision-making of urban renewal. The legal system should include a programmatic document that clarifies the purposes of urban renewal in the macro view of urban development. Under current regulation, there is “Regulation on the Expropriation of Buildings on State-owned Land and Compensation” issued in 2011, which applies to the building expropriation in urban

renewal projects for public interests. It is the only regulation that defines public interests as the purpose of urban renewal. However, in reality, 70-80% of urban building demolition in urban renewal is for commercial purposes rather than public interests (Xu, 2010). To avoid the loophole for commercial-purposed projects being planned and implemented in the name of public interests, the definition and evaluation criteria of public interests of urban renewal should be detailed.

Moreover, as the foundation of urban renewal decision-making, series of specific laws and regulations should be formulated to make clear and detailed provisions on decision-making procedures, roles, and functions of participants, administrative, organizational structure, decision-making approach, and basis, etc. At the same time, these specific laws and regulations should take a full account of different local contexts, such as development level, urban heritage. Based on detailed legal provisions, accountability can also be enhanced to strengthen the responsibility of stakeholders, especially government sectors and consulting parties.

It is no doubt that it is the government's responsibility to establish a comprehensive supportive legal environment, but there exists one major challenge to be overcome. Due to the complexity of the proposed legal environment, unique culture, and administrative system in China, it is considered not feasible to learn the lessons from other countries and regions directly. Therefore, it may be of great challenge for the Chinse government to explore the possibility in its own way. To achieve the goal, it requires the collaborative contribution of plenty of professionals not only inside but outside government sectors through a great deal of research and field investigations.

5.5.2.2 Improved Organizational Structure and Cooperation Mechanism

The supportive legal environment provides a basis for the solution of urban renewal decision-making problems. Based on this, the improvement of the current organizational structure and cooperation mechanism is one crucial component of problem-solving, which can be seen from the results. The reorganization can simplify the current organizational structure and reduce the number of corresponding government sectors. The simplification also contributes to reducing the barriers of the cooperation mechanism establishment.

A specialized urban renewal authority can be established to act as the main responsible body of urban renewal in the municipal and district government, respectively. It can reduce feedback loops and communications between government

sectors and improve the efficiency of urban renewal decision-making. In some countries and regions, such as Hong Kong and the United Kingdom, the relevant urban renewal authorities are non-governmental organizations (Hui et al. , 2008). However, considering the different social and administrative system in China, it is hard for non-governmental organizations to play a full role in public projects (Li, Ng, 2012a). Therefore, the specialized urban renewal authority in China should belong to the government administrative system to make full use of administrative resources in professional decision making. It is parallel with other sectors (e.g., urban planning bureau) in the same government level and takes over the major urban-renewal-related functions of other sectors. In the district government, this authority takes the responsibility of conducting relevant investigations, initiating and leading urban renewal projects, developing urban renewal plans, etc. of all types of urban renewal projects. At the municipal level, the authority does not interfere with the works of the urban renewal authorities under district governments. It examines and approves the plans at the district level and coordinates with other sectors for the implementation of the plans.

Establishing an effective cooperation mechanism is the top priority strategy in this research. Overall, the cooperation mechanism can provide detailed guidance on how government sectors, consulting parties, and other relevant organizations can effectively cooperate in the decision-making process. To support the mechanism, establishing an information platform involving relevant information for decision-making will be helpful. The information includes three major parts: (1) the detailed characteristics of all potential and designated urban renewal projects; (2) all relevant plans, policies, laws, and regulations, and specific sector requirements (interests); (3) is the dynamic decision-making process regarding the involvement of different stakeholders. All the information and progress should be kept updating and transparent to all the above stakeholders. With the support of the information platform, a cooperative decision group consisting of representatives of all relevant stakeholders can be formed to better coordinate and monitor the works. The effective cooperation mechanism helps to overcome the drawbacks of the node to node communication and improves the efficiency of stakeholder participation.

The improved organizational structure and cooperation mechanism requires a considerable change in the current system. However, adopting new issues to replace the old ones in the political system in the short term may face the challenge of path dependence since the political participants are more likely to follow the old path in the new system, even two systems are not relevant (Bebchuk and Roe, 1999). To cope with the challenge, it requires a considerable amount of works to design the details of the new system carefully and rectify the activities through strict supervision by all cooperated stakeholders.

5.5.2.3 Detailed Urban Renewal Planning Approach

In current urban renewal decision-making, the outcome is an administrative order about when and how to implement urban renewal projects. It is unsystematic and overly independent from the urban planning system. Therefore, specific urban renewal planning for each designated renewal area should be developed as the outcome of decision-making and incorporated into the urban planning system. Each urban renewal planning should be based on the overall strategy of urban development, current planning (e.g., urban planning, land-use planning), and urban-renewal-related laws and regulations. It integrates the key consideration of various other planning and strengthens the feasibility and implementation of the projects. The urban renewal planning clarifies the boundary of projects, main objectives, timing, renewal modes, financial arrangement, compensation, and relocation. It also plays the role of the programmatic document and guides the development of statutory plans and regulatory plans.

Besides, how to conduct urban renewal planning should be explicit. First, it requires a clear definition of the scope of factors that need to be well-considered in the planning procedure. It includes macro (e.g., urban development) as well as micro factors (e.g., neighborhood and building condition), considers not only economical (e.g., investment value) dimension, but also the environment (e.g., hygiene condition) and social (e.g., cultural value) aspects. Second, the evaluation system of the above factors should be established. The system has two key points. One is the evaluation method for each factor; the other is the criteria of the evaluation. Based on the evaluation results, it can figure out which areas need to be renewed, and the renewal mode, timing, financial arrangement, compensation/relocation of each designated urban renewal area.

Although establishing a detailed urban renewal planning approach is an essential and urgent need, there is one significant difficulty in achieving it. According to the opinions of several interviewees, implementing comprehensive urban renewal planning requires plenty of professionals (planners) with sufficient and holistic knowledge about urban renewal. Because most of the professionals only participate in one specific part of current urban renewal decision-making, the new urban renewal planning approach needs to be adopted along with the training of professionals (planners). It may take a relatively long time but necessary to get it done.

5.5.2.4 Optimized Decision-Making Process

The current urban renewal decision-making process is complicated and fragmented. Notably, there is no feedback loop between the project plans making and compensation plan making. It creates enormous amounts of transaction costs and loopholes for in-situ residents to obtain more benefits (Zhuang, Qian, 2020). Therefore, a simplification of the decision-making process is required to resolve the current issues and facilitate the improved urban renewal planning approach, organizational structure, and cooperation mechanism. The optimized process follows four principles: first, it requires the combination of previous project planning stage and compensation planning stage; second, post evaluation should be strengthened in the process; third, the administrative examination and approval should be simplified; finally, the public (in-situ residents) need to be involved in the early stage.

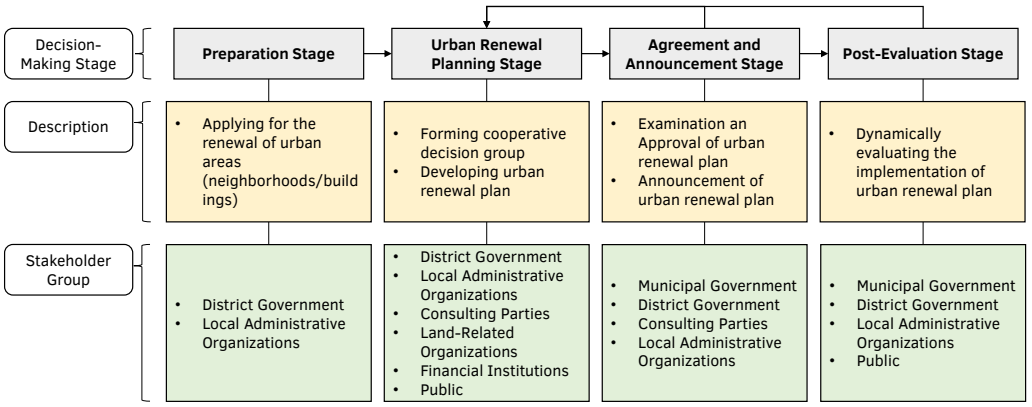

FIG. 5.4 Summary of Optimized Urban Renewal Decision-Making Process

Based on the above principles, the urban renewal decision-making in China can be optimized, which is shown in Figure 5.4. The proposed optimized decision-making process consists of four major steps. The first stage is the preparation stage. District urban renewal authority and local administrative organizations conduct preliminary information searching about potential urban renewal areas and apply for urban renewal plans. The second stage is the urban renewal planning stage. In this stage, urban renewal authority in the district government plays a leading role in administration and coordinate various other stakeholders. Based on the detailed urban renewal planning approach and cooperation mechanism, a cooperative decision group participated by the representatives of multiple stakeholders

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(including the in-situ residents) is formed to designate urban renewal areas and develop corresponding urban renewal plans. The third stage is the agreement and announcement stage. In this stage, urban renewal authority in the municipal government will examine and approve the urban renewal plans. Moreover, the urban renewal plan, especially compensation details, will be announced to the public for the agreement of in-situ residents. If the agreement cannot be reached by either municipal government or in-situ residents, the plan will return to the second stage for further modification. The final stage is the post-evaluation stage. The urban renewal authorities in both municipal and district levels play a leading role in dynamically evaluate the implementation of proposed urban renewal plans with the support of local administrative organizations and the public. If the plan cannot be implemented well in practice, it will also return to the second stage for further modification.

Based on the interview, the major challenge for optimizing the current decision-making process is the post-evaluation. It is not only about whom to evaluate but also refers to a wide range of criteria and standards for such post evaluation. It requires extensive efforts of professionals to conduct comprehensive research and design to make this stage rational and feasible.

5.6 Conclusion

Urban renewal plays a critical role in modern urbanization in China. However, there are many problems in current urban renewal decision-making, which leads to many unintended consequences (Zhuang, Qian, 2019). Therefore, implementing a set of strategies to deal with the problems has become an urgent need. Based on the authors' previous research and literature review, this paper adopted the ANP approach to determine the critical problems and strategic alternatives. In sum, according to the key elements of urban renewal decision-making, there are four major problems identified, which are stakeholder capacity, process, legislation, and stakeholder perceptions. Under the major problems, 14 sub-problems were identified in total. Moreover, nine different strategies for tackling the problems were concluded. In this research, the relationships between the identified problems and proposed strategies, as well as their priorities, were revealed.

According to the findings of ANP, legislation is the most significant major problem in current urban renewal decision-making, especially its two sub-problems, the lack of participation and cooperation mechanism and the guidance on urban renewal planning. Under the major problem of stakeholder capacity, the complex network in governmental sectors created by diverse sectors in different governmental levels is another big sub-problem. Moreover, in terms of the process problem, the fragmentation of decision-making stages and the massive waste of time and resources in coordination and negotiation are also severe sub-problems. The problem of stakeholder perceptions is relatively less important.

The empirical results also show that the best strategies are establishing effective cooperation mechanism, making specific supporting laws and regulations, designing specific urban renewal planning approach, simplifying the decision-making process and strengthening post evaluation, and setting up a specialized urban renewal authority. Comprehensive considering the above, this research proposed a strategic framework for better solving the problems. In this strategic framework, the supportive legal environment plays the role of the foundation. The improved organizational structure and cooperation mechanism, the detailed urban renewal planning approach, and the optimized decision-making process are another three important components in the framework, which can supplement each other in different aspects.

As this research focused on the decision-making of urban renewal in China, the findings can be applied in one specific stage (decision-making) of the whole urban renewal projects in China. In practice, the research methodology and framework can be adopted in a broader scope in different geographic contexts. Moreover, by collecting data through one round of group meeting may bring about subjective factors to the result. These need to be acknowledged and improved in future research.

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6 Conclusions

6.1 Introduction

Since the late 1970s, China's fast growth of economy and urbanization has driven large-scale urban renewal projects. It has not only made significant contributions to urban development but created many unintended problems (Yau and Chan, 2008), and how the decisions were made is one of the major causes of the problems (Juan et al. , 2010b, Maginn, 2007, Mayer et al. , 2005, Wang et al. , 2014). To deal with the problems, urban renewal in China has stepped into the new stage of sustainability, considering more social factors such as participatory methods, social management, etc. (CSUS, 2019). Exploring participatory decision-making mechanisms in urban renewal by considering Chinese characteristics is an effective step to meet the demands of sustainability in the new era (CCCPC and SC, 2016, MLR, 2016). Therefore, this thesis aims to better understand and improve urban renewal decision-making in China. In this respect, ample attention was paid to the complex stakeholder participation and decision-making process, thus to propose sets of strategies for solving the problems of current urban renewal decision-making.

6.1.1 Research Questions

The main research question of this thesis is:

What are the problems of current urban renewal decision-making in China, and what strategies can address these problems?

This question is broken down into four key questions, which were tackled respectively in Chapter 2, 3, 4, and 5:

TOC

1 What are the expectations (interests) of different key stakeholders in urban renewal projects in China?
2 What are the stakeholders' roles, characteristics, and their participation structure in urban renewal decision-making in China?
3 What are the problems of the current urban renewal decision-making process in China?
4 What is the set of strategies for solving the problems of current urban renewal decision-making in China?

Under each major research question, there are several specific sub-questions to be answered, respectively.

TABLE 6.1 Summary of Responses to the Research Questions

Chapter	Key Question	Sub-Question under Each Key Question	Check List of Responses to the Questions
Chapter 2	What are the expectations (interests) of different key stakeholders in urban renewal projects in China?	Who are the key stakeholders in urban renewal projects?	Five key stakeholders in urban renewal projects are identified.
		What do the different key stakeholders expect to achieve through urban renewal projects?	Eighteen possible stakeholders' expectations are identified.
		What are the differences in stakeholders' expectations among key stakeholders?	The identified expectations are compared among the key stakeholders to answer the question in detail.
Chapter 3	What are the stakeholders' roles, characteristics, and their participation structure in urban renewal decision-making in China?	Who are the stakeholders in urban renewal decision-making?	Using the case of Chongqing, 36 stakeholders representing eight different stakeholder groups in the urban renewal decision-making process are identified.
		What are the characteristics of each stakeholder?	The type of interest, interest level, power level, and knowledge level are used to illustrate the characteristics of each stakeholder through stakeholder analysis.
		What are the cooperative relationships between the identified stakeholders?	The interaction network between different stakeholders/groups in urban renewal decision-making is explored through social network analysis.

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TABLE 6.1 Summary of Responses to the Research Questions

Chapter	Key Question	Sub-Question under Each Key Question	Check List of Responses to the Questions
Chapter 4	What are the transaction costs of the current urban renewal decision-making process in China?	What is the detailed urban renewal decision-making process?	Using the case of Chongqing, there are four major decision-making stages being identified, as well as related administrative activities and involved stakeholder groups.
		What are the transaction costs borne by different key stakeholder groups in each decision-making stage?	According to the transactions' determinants: asset specificity and uncertainty, there are 19 transaction items evoked in 4 decision-making stages being identified, triggering five types of transaction costs.
		What are the levels of different transaction costs given to each key stakeholder group?	According to the third transactions' determinant: frequency, the relative level of time consumed on each transaction by each stakeholder group is measured, thus reflecting the levels of different transaction costs.
Chapter 5	What is the set of strategies for solving the problems of current urban renewal decision-making in China?	What is the list of problems of current urban renewal decision-making in China?	Based on the result of Chapters 2 to 4 and the literature review, there are four major problems and 14 sub-problems of current urban renewal decision-making in China being concluded.
		What are the possible strategies to solve the problems?	Based on the result of Chapters 2 to 4 and the literature review, there are nine proposed strategies being concluded.
		What are the priority strategies comparing to others?	By adopting ANP, the priorities of the identified problems and the strategies are examined. Finally, a strategic framework for solving the urban renewal decision-making problems is proposed accordingly.

6.1.2 Structure of the Chapter

This concluding chapter first summarizes the research findings and answers the research questions formulated above. Then, it comes to the reflections on both research outcomes and methodologies of this research. Finally, recommendations for policies and future research are presented.

6.2 Summary of the Research Findings

In Chapter 1, a conceptual framework for exploring urban renewal decision-making in China is proposed, based on the extensive review of existing research studies on participatory decision-making and the characteristics of urban renewal decision-making. According to this framework, there are two vital elements to be focused on, one is the stakeholders, and the other one is the decision-making process. Chapters 2 and 3 focus on the former, and Chapter 4 pays attention to the latter. Then, Chapter 5 contributes to propose a strategic framework to address the identified problems and improve urban renewal decision-making in China.

This section summarizes the findings of the four core chapters of this thesis, with each chapter covering one major research question and related sub-questions. Table 6.1 summarizes how each research question/sub-questions have been addressed in the appropriate analyses and chapters. An overview is provided in this table to ensure all related research questions and sub-questions have been adequately responded to.

6.2.1 Stakeholders' Expectations in Urban Renewal Projects in China

1 **What are the expectations (interests) of different key stakeholders in urban renewal projects in China?**

Through both in-depth interviews and questionnaire surveys with various stakeholders, the results reveal that there is no pair of stakeholders who hold similar expectations in urban renewal projects. This should not be surprising, since, due to

ignorance and misunderstanding, conflicts among stakeholders often emerge during the urban renewal process. Given the extent of conflict, it is found that maintaining social stability is one of the top concerns attached by the government. However, many other stakeholders hold a contrary view of such conflict. As a valuable social asset, protecting the existing social network in the community is extremely important for the affected residents. Nevertheless, the need to preserve the social network is almost ignored by both government and consultants. An example of this divergence in stakeholder views concerns the environmental dimension. Even though building energy efficiency is of concern for the public and the in-situ residents, it is not always on the agenda when conducting urban renewal projects, since it is relatively less important for governments and consultants.

From the economic perspective, it is not surprising that economic benefits are seriously expected by all stakeholder groups, but again, these expectations have different standpoints. Whereas the government and the general public are more concerned about local economic development, the in-situ residents pursue their private economic interests. This disparity may challenge the core value of "the public interest" in China, since it means different things to different stakeholders. Moreover, the results also provide evidence for a huge disparity of expectations between in-situ residents in the two types of urban renewal projects (rehabilitation and redevelopment). Staying in the same neighborhoods, or moving out to a new one, strongly influences the residents' perceptions. To understand the diverse needs in different projects, it would be beneficial to hear more voices from the affected groups.

6.2.2 The Role of Stakeholders and Their Participation Network in Decision-Making of Urban Renewal in China

2 What are the stakeholders' roles, characteristics, and their participation structure in urban renewal decision-making in China?

Through stakeholder analysis, it reveals the structure of knowledge, power, and interest of stakeholders in decision-making, by considering the already-acknowledged stakeholders as well as the informally involved ones. The stakeholder analysis shows the dominant discourse power of the district government. Also, it reveals that, although the professional knowledge of consulting parties (e.g., scholars and professional experts) provides the important basis of the decision, they cannot exert much influence on decision-making, and neither are they strongly affected by the outcomes. Furthermore, real-estate developers cannot formally be

involved in the decision-making process, but they can nevertheless still exert their influence through informal relationships with governmental sectors.

Through social network analysis, the heterogeneous and complex interaction network of urban renewal decision-making is fully exposed to scrutiny, and their significance is better understood. It reveals that, although municipal government sectors are at the top decision-making level, they are actually quite peripheral in the network since the systemic collaborations between them and the other stakeholders are not strong. In addition, local administrative organizations are the grass-rooted governments that understand the issues, yet are almost powerless in decision-making. Nevertheless, they still play an important role through cooperation and coordination during the decision-making process. Moreover, it is apparent that the affected residents are strongly affected by the outcomes, yet also do not hold much formal power in the decision-making. However, this does not mean they are marginalized in the network. The connections they hold indicate that the affected residents can indirectly influence the decision-making at a fundamental level.

6.2.3 The Analysis of Urban Renewal Decision-Making Process in China

3 **What are the transaction costs of the current urban renewal decision-making process in China?**

Based on two transaction determinants: asset specificity and uncertainty, the list of transactions that emerged in each decision-making stage is identified. And what types of transaction costs are generated can be found out accordingly. The results show that the decision-making process of urban renewal is full of transaction costs. Most of the transactions occur in the last three stages. In the project planning stage, many transactions relating to all stakeholder groups occur mainly due to the uncertainty of stakeholders' behavior and institutions, and the specific site of the designated urban renewal area. In the compensation planning stage, many transactions arise from similar determinants, creating transaction costs, and prolonging the duration of plan-making. In the final agreement stage, the diverse characteristics of in-situ residents and the uncertainties of their behavior are the major determinants of transactions, which creates transaction costs in reaching an agreement with every residential unit.

To analyze the scale of transaction costs, the third transaction determinant of "time" is applied. The results reveal that the distribution of transaction costs is uneven,

arising from not only decision-making stages but also stakeholder groups who bear the costs. In addition, almost every transaction is experienced by more than one stakeholder group. For all key stakeholder groups, most of their time-consuming transactions generate negotiation/coordination costs. In terms of both district government and local administrative organizations, their top two time-consuming transactions both arise from the coordination/negotiation with in-situ residents, occurring in the final stage. Given consulting parties, besides coordination/ negotiation costs, the top three time-consuming transactions also relate to increases in research costs, which are different from all the other stakeholder groups. In comparison, the district government bears the transaction costs generated by all identified transactions, and the municipal government experiences the minimum number of transactions. The time consulting parties spend on each related transaction is higher than all other groups.

6.2.4 Strategies for Improving Urban Renewal Decision-Making in China

4 What is the set of good strategies for solving the problems of current urban renewal decision-making in China?

Considering the status quo of urban renewal decision-making in China and three key elements of participatory decision-making (also illustrated in Chapter 1), four major problems in current urban renewal decision-making in China can be concluded: stakeholder capacity, stakeholder perceptions, process, and legislation. Based on the findings and reflected problems in Chapters 2, 3, and 4, and as supported by the literature review, under the major problems, 14 sub-problems are identified in total. Based on these, nine different strategies for tackling the problems are summarized accordingly.

Based on the results of ANP, it is found that the existing legislation is the most significant major problem in current urban renewal decision-making. This is mainly reflected in its two sub-problems, the lack of participation and cooperation mechanism and the guidance on urban renewal planning. Given the major problem of stakeholder capacity, the complex network in governmental sectors, created by diverse sectors in different governmental levels, is another big sub-problem. Moreover, in terms of the process problem, the fragmentation of decision-making stages, and the massive waste of time and resources in coordination and negotiation are also severe sub-problems. Yet, the problem of stakeholder perceptions is relatively less important.

The empirical results also show which strategies (policy implications) proposed in Chapters 2, 3, and 4 are more important and urgent for solving the current problems of urban renewal decision-making in China. The priority strategies are: establishing an effective cooperation mechanism; making specific supporting laws and regulations; designing a specific urban renewal planning approach; simplifying the decision-making process and strengthening the post-evaluation process; and setting up a specialized urban renewal authority. These priorities are thus embodied in a strategic framework for the authority to deal with complex problems. Thus the remedy is to propose a set of right strategies that are not only essential but also in urgent need.

In the proposed strategic framework, the supportive legal environment plays the role of the foundation. The improved organizational structure and cooperation mechanism, the detailed urban renewal planning approach, and the optimized decision-making process are three important components in the framework, which can supplement each other in different aspects.

6.3 Reflections

6.3.1 Reflections on the Research Outcomes

To better achieve the goal of sustainability, this research study conducted an in-depth exploration to understand the current urban renewal decision-making in China. In Chapter 1, a conceptual framework is proposed to illustrate what elements need to be focused on for the exploration. The first element is the exploration of stakeholder participation. It refers to the clear identification of stakeholder lists, investigation of their characteristics, interests, perceptions, and cooperation/interaction relationships. The second one is the exploration of the efficiency and effect of the current decision-making process. Through the in-depth exploration of the above two elements, the third element can be revealed, which is the functions, comprehensiveness, and the effect of laws and regulations. Chapters 2, 3, and 4 directly answer the research questions regarding these first two elements: stakeholder participation and decision-making process. At the same time, four major research findings are reflected, which revolve around all three elements in

the conceptual framework. In terms of stakeholder participation, the following two aspects are reflected: 1) ambivalent perceptions of different stakeholders; and 2) the centralized government power and the decentralized government sectors. In view of the process, the complexity of the decision-making process is highlighted. Finally, in the perspective of laws and regulations, their missing role in urban renewal decision-making is made clear.

1 Ambivalent Perceptions of Different Stakeholders

In exploring stakeholder participation in urban renewal decision-making, this research study pays much attention to the stakeholders' perceptions (See Chapters 2 and 3). Focusing on their perceptions is significant in understanding the causes of their behaviors during the decision-making process. It is interesting to find that, although every interviewee agrees that good cooperative relationships are one critical foundation of project success, they are not always willing to cooperate actively. It is particular to the Chinese context and contrary to other research in the western background (Booth and Halseth, 2011, Brabham, 2012, Elsinga et al. , 2009, Strasser et al. , 2019). One important reason is the different understanding of the project goal. In China, there is a consensus that achieving "public interest" is the key goal of urban renewal in a broad sense. Following the principle of "public interest", urban renewal has brought about tremendous development and prosperity in China in recent decades (Liao, 2013, Wang, 2013). In the view of government, "public interest" in urban renewal is defined as a macro-scope interest, meaning, the promotion of economic development, rational land use, and minimum social contradiction. Nevertheless, this view is in contrast to the understanding of in-situ residents, who bear most of the direct consequences of urban renewal. From the government's perspective, the term "public" only includes the masses living outside the renewal areas. From this viewpoint, it follows that what in-situ residents need to do is to comply with other stakeholders' broader-scope interests. Yet, it may lead to the failure of public policy without impartially assessing who should benefit or be well protected (Ho, 2013). If in-situ residents cannot really benefit from the achievement of public interest, the urban renewal will never meet the expectation of sustainability.

Since the different stakeholders define their goal in urban renewal diversely in both broad and narrow senses, it is not strange that strong distrust or disrespect among different stakeholders has emerged in urban renewal decision-making. For instance, government sectors hold the view that the in-situ residents merely care about their own benefits and cannot understand the governments' intentions. The in-situ residents harbor the view that the government officers and consultants are not trustworthy, since they are not willing to protect the interests of the local public.

It is no doubt that stakeholders' awareness has a great impact on their participation and cooperation (Greene, 1987). In a nutshell, such strong distrust and disrespect strengthen the deadlocks, and strongly increases the barriers of cooperation.

The stakeholders' negative perceptions of public participation also cause passive cooperation in urban renewal decision-making. In China, lacking facilitation for public participation is considered as the leading cause of social conflicts in public projects and has been criticized in many research studies (Enserink and Koppenjan, 2007, Li et al. , 2012, Tang et al. , 2008). In western society, broad public participation is always the key characteristic of successful public projects (Brabham, 2012, Haffner and Elsinga, 2009). Therefore, it is also argued that introducing more public participation approaches and empowering the public is an irrefutable way to resolve the issues in China (Tang, Wong, 2008, Zhang and Fang, 2004). However, in this research study, it is surprising to find that there are few stakeholders who believe in the significant value of public participation in urban renewal decision-making. Since the public (general citizens and in-situ residents) barely trust authorities and professionals, they do not believe they can exert great influence in the urban renewal decision-making process, even if their participation can be enhanced. From the view of the professionals and authorities, they do care much about the public voice, but they also doubt if the public is eager to make contributions.

2 The Centralized Government Power and the Decentralized Government Sectors

In China, the government retains the strong power on urban governance through the dominant control of policy release, resource allocation, and service delivery, etc. (He and Wu, 2005). In urban renewal decision-making, it has been highlighted in many research studies that the government plays the dominant role (Jiang et al. , 2009, Li et al. , 2018, Liu et al. , 2017, Ren, 2011). This argument is also clearly supported in this research (see Chapter 3). However, playing the dominant role does not mean that the government can be seen as a single stakeholder holding only one opinion in decision-making. There are many governmental sectors in different administrative levels involved in local urban renewal projects. Indeed, different sectors can strongly influence the decision-making in planning, housing, urban land, development, etc. separately. Yet, their functions and responsibilities are not well-defined when cooperating in the decision-making process. Therefore, none of them can be fully responsible for the success of projects, and no one has the power to hold all the cards. It creates difficulties and low-efficiency for cooperation with stakeholders inside and outside the governments.

It is not new to find some research studies arguing that the dominant government power is the major cause of negative outcomes of public projects in China (Chi et al. , 2014, Gore, 2019, Wang et al. , 2015). But due to the complexity of government sectors, such a conclusion cannot be drawn in this research. Simply, the dominant government power is not the major reason. The negative outcomes of urban renewal projects have occurred because of many other problems (see Chapters 2 to 4) hidden behind the government-led and top-down decision-making approach.

3 The complexity of the Decision-Making Process

By definition, decision making is a rational process to make a choice (Chankong and Haimes, 2008, Hwang and Lin, 2012, March and Olsen, 1986). As one pioneer in the field of decision-making theory, Simon (1960) divided the decision-making process into three principal phases: (1) intelligence, (2) design, and (3) choice. Intelligence implies finding the need to make a decision. The design phase is to investigate and develop possible alternatives. The choice is the final step, which is to evaluate and select the most appropriate alternatives. The definition and three principal phases of decision-making are not complicated in theory. However, in the practice of urban renewal decision-making, the great complexity of the process is observed and brings about difficulties in understanding and solving the problems that occurred. The complexity is mainly reflected in two dimensions. One is that in urban renewal decision-making, there are several sub-decisions to made, and one sub-decision is strongly related to the next one. For instance, to successfully reach a final agreement on the compensation/relocation with all in-situ residents, it requires a rational compensation plan. And making a rational compensation plan is highly relevant to the working quality of the development of the project plan. Another dimension of the complexity is a large number of involved stakeholders in different stages. In different decision-making stages, or even in different administrative activities under each stage, the involved stakeholders are diverse. These dozens of stakeholders hold irreplaceable functions and have various interests in the decision-making process.

The above complexities create barriers to explore urban renewal decision-making deeply. Thus they pose barriers to providing strategies to improve the system. Due to the complexity, in this research, it is not surprising to find drawbacks in the current decision-making process (see Chapter 4). The key drawbacks are mainly reflected in two aspects. The first is the strict separation between stages (sub-decisions). In the current process, the stages of project planning and compensation planning are strictly separated. Based on the current institution, when the project plan is approved, all relevant sectors should follow it and develop a compensation plan accordingly. There is no feedback loop for redeveloping the project plan.

Furthermore, strict separation provides loopholes for in-situ residents to gain more economic benefits. The in-situ residents may make use of the long duration between project planning and compensation stages by constructing more buildings with low costs and quality to get more compensation. The second key drawback is the late involvement of in-situ residents. In current urban renewal decision-making, the in-situ residents only participate in the last stage. They can exert few influences on urban renewal area designating, project plan making. Generally, after the compensation plan is made, the in-situ residents are informed by the authority about the results, and they negotiate with the government to reach a final agreement on the compensation plan. However, in many cases, the conflicts are not only about the compensation plan but the whole project. Since their role is missing in the project plan and compensation plan making, it creates many more barriers to build positive communication between government and in-situ residents at the end, thus increases the difficulty for reaching final agreements.

4 The Missing Role of Laws and Regulations

This research study pays much attention to stakeholder participation and the administrative process of urban renewal decision-making. Indeed, it is found that there are many drawbacks to current decision-making, affecting the sustainability of urban renewal projects. However, several critical problems are neither caused simply by stakeholders themselves nor the irrational designed process. What is hidden behind the problem is the missing role of laws and regulations. On the one hand, the existing laws and regulations cannot be fully abided by key stakeholders in some cases; on the other hand, few restrictions and too little guidance are provided due to the lack of relevant laws and regulations. Although there are several research studies that identified the problems of urban renewal in China in different dimensions, few of them discuss the missing of such fundamental roles (Jiang et al. , 2012, Lai and Tang, 2016, Liao, 2013, Zhai and Ng, 2009).

Before 2011, government-led urban renewal projects were criticized for being overly dependent on market power in China (Li, Kleinhans, 2018, Liao, 2013). To address the issue, "*Regulation on the Expropriation of Buildings on State-owned Land and Compensation*" was released to disallow the involvement of developers in urban renewal decision-making (Li, Kleinhans, 2018). However, it was found that such regulation cannot be fully abided by all relevant stakeholders, including the government sectors (see Chapter 3). Given the high capital costs and limited fiscal budget, any stakeholder independently initiating urban renewal projects on the lands with low investment value would be a huge risk for the government. Under this condition, in most cases, the government has two choices. The first choice is to

postpone or even not to support/permit the project. The second choice is to support the project by building informal connections with developers in the decision-making process to reduce the risk. Therefore, it is not hard to imagine that simply avoiding the involvement or market power at the legal level is not enough to resolve the issue, because it cannot essentially reduce the huge risk borne by the government.

Comparing to the above, the lack of relevant laws and regulations are the more severe problem (see Chapter 5). The lacking part can be explained in terms of three questions: how to make the plan of urban renewal projects; who should take responsibility for the unintended outcomes; and, how different stakeholders can cooperate in decision-making.

The first aspect refers that there is a lack of detailed guidance on the planning of urban renewal projects. The definite standards of critical factors in decision-making, such as urban development, industrial development, land use, social environment, etc. is lacking in current laws or regulations. Moreover, the planning process and approach are not explicit.

The second aspect is that it lacks mature post evaluation and accountability mechanisms in urban renewal decision-making. Thus, the stakeholders with strong discourse power are not much affected by the outcomes of their decision. And the other stakeholders have few influences on the decision but bear much of the adverse outcomes.

The third aspect refers that there is no mature mechanism for stakeholders to participate in providing their information/knowledge and expressing their demands efficiently. The functions of each stakeholder are not well-defined when cooperating in the decision-making process. Thus, in many cases, one stakeholder may try to cooperate with others only when it needs support, or its interests are threatened. In this research, it is found that the lack of the above three aspects of current laws and regulations is the critical cause of problems in urban renewal decision-making.

6.3.2 Reflections on the Research Methodology and the Data

This thesis focuses on the exploration of urban renewal decision-making in China, in view of the involved stakeholders, decision-making process, and the strategic framework to solve current problems. It uses mixed methods to address the research aim. And the data is mainly collected through in-depth interviews, questionnaire surveys, and group meetings in the main district area in Chongqing. For case area

selection, Chongqing is designated mainly for two reasons. The first is that it is a pioneer city of urban renewal, which provides plenty of practical experiences and professionals. The second, is that it shares the typical institution of urban renewal decision-making in China. However, it should be noted that there are hundreds of municipalities in China. It is not possible to find one city that can represent all the others. For instance, some unique cities (e.g., Shenzhen and Shanghai) have specific real -estate market environments and urban renewal institutions, which are essentially different from their counterparts (Yi, 2018, Yung et al. , 2014). However, due to the constraints of time, finance, and the author's capacity, it is not feasible to conduct the fieldwork in more case cities by reaching so many relevant stakeholders and projects.

The use of in-depth interviews is one of the major data collection methods in this study. Such rich data provides the opportunity to explore the in-depth perspectives of various involved stakeholders by recording and evaluating their narratives and emotions, which reflects not only their opinions but also perceptions towards urban renewal decision-making. In conducting the in-depth interviews, the support of colleagues from the local university and some interviewees' acquaintances quickly increased the interviewer's familiarity with the case area and helped to build mutual trust between the interviewer and the interviewees. It has been found to be very meaningful, because this thesis is focusing on one of the most conflicting parts (decision-making) of urban renewal projects, which pose many obstacles to reach government officers (especially the leaders) and stakeholders (especially in-situ residents). Although the author is well-supported in the study area, there were still some barriers to overcome during the interviews. To be specific, some professionals from government sectors, consulting parties, and developers refused to be audio recorded during the interview. Their consent was restricted to the taking of notes only. This situation is quite common in China. In many circumstances, these professionals, especially government officers, were circumspect in attending interviews because they know that they are fully responsible for their words, which may be sensitive during the interview. They do not permit the audio records to be distributed or utilized for another purpose. Especially when the interview question is related to conflicts between stakeholders or informal institutions, some of these interviewees even hesitated about notes being recorded at all. In addition, the author found that, when interviewing in-situ residents, they tended to treat him (the interviewer) as the representative of the government. Therefore, some of them strongly expressed their dissatisfaction with their compensation or the behavior of civil servants. They complained a lot about their unfair compensation and insisted on the interviewer to help them get more benefits. Thus, a much longer time was spent to finish the interview since the interviewer had to calm them down for several times and get back to the interview questions.

This research study also conducted questionnaire surveys to support quantitative analysis. However, because of the limitation of research time and finance, the questionnaire survey did not elicit more detailed information. In addition, the same barriers were faced when conducting questionnaire surveys with in-situ residents through face-to-face interaction. Under the false assumption that the author (or helper) was the government's representative, some in-situ residents were not willing to patiently fill in the questionnaire. Instead, they kept complaining about their dissatisfaction and asked the staff to deliver their message to the government. Consequently, their negative emotional atmosphere may have affected the response rate and the number of valid questionnaires.

Another major data collection method is the group meeting. It is used in Chapter 5 for collecting data for Analytic Network Process (ANP). Before deciding to adopt a group meeting for data collection, a questionnaire survey was designed to collect the required data. However, the outcomes were proved to be invalid, which may be caused by two reasons. One reason is that most of the respondents only participate in specific parts of the decision-making process rather than the whole from the beginning to the end. It is uncommon that they can hold a holistic view of urban renewal decision-making. Another reason is that without the face-to-face explanation and confirmation, the author would not be confident that different respondents would have a clear understanding of the questionnaire for ANP analysis. Therefore, to overcome the drawbacks of the questionnaire survey, a group meeting was conducted for ANP data collection. Nevertheless, due to the constraints of time and finance, it was not feasible to conduct more group meetings. The author is aware that only one round of group meetings may not avoid all subjective factors (e.g. overly subjective judgment), even if one more round of interviews were taken for data validation at the end.

6.4 Added Value of the Research

6.4.1 Contribution to Scholarly Knowledge

As shown in the previous chapters, several research studies have already probed urban renewal in different aspects. However, few of them conducted an in-depth exploration of the urban renewal decision-making in a holistic view. Further, even less of them considered the situation in the Chinese context. Thus, the focus of this thesis is on systematically exploring the current urban renewal decision-making in China. The aim is not only to provide a better insight into the current decision-making system but also to develop a set of strategies to resolve the identified issues. The data in this research mainly originates from China, but the research methodology can be seen as an example for further application in another context. It adds new knowledge on the exploration of the decision-making of public projects.

This research study consists of four major empirical parts. The first two parts are the exploration of the stakeholders. In the first study, the expectations of different key stakeholder groups in urban renewal projects are probed. This has never been accomplished previously, especially the systematic comparison between different stakeholder groups. In the second study, the mixed methods of Stakeholder Analysis and Social Network Analysis, with quantitative and qualitative data, are processed into triangulation analysis to enrich the holistic understanding of stakeholder participation in urban renewal decision-making. This study contributes significantly to the scientific field by adopting a combined Stakeholder Analysis and Social Network Analysis in the research of urban renewal.

The third part of this thesis is the exploration of the process. It presents the exploration of the urban renewal decision-making process under the analytical framework designed based on transaction costs theory. It is accomplished by adopting the mature theory (transaction costs theory) in the specific field. It provides a viewpoint from which to look into a complex system in China systematically.

In the last part of this thesis, a strategic framework is proposed for dealing with the existing problems of urban renewal decision-making, as identified in the previous three parts. The method of the Analytic Network Process is applied to probe the priority of identified problems and proposed strategies. The effectiveness of the method is demonstrated by holistically considering such complex fields (many problems and strategies).

6.4.2 Contribution to Society /Practice

This thesis contributes to a better understanding of the urban renewal decision-making in China. It provides a better insight into the existing problems and a set of strategies for dealing with the problems. This is of importance to not only the scientific field but also for society and the stakeholders/practitioners. Since the strategy is designed from the perspective of the government, it can be directly adopted by the main decision-maker - the government. Through this empirical study, the government at different administrative levels can adopt a more holistic view of the decision-making system, knowing what the drawbacks of this system are and how urgently it needs to be improved. Hopefully, it will help to change their perceptions and guide them to resolve the issues, thus to achieve the requirement of sustainability.

6.5 Recommendations

6.5.1 Recommendations for Policy

Today, urban renewal in China has stepped into a new era, changing from merely focusing on physical improvements to the new mode of considering more social factors in view of sustainability (CSUS, 2019). The in-depth exploration of this research provides a comprehensive view of urban renewal decision-making and develops strategies to meet the requirement of sustainability.

In a nutshell, the findings of this research can be useful for all administrative levels of governments to recognize the problems existing in current urban renewal decision-making through a better understanding the diverse expectations, characteristics of different stakeholders (groups), complex participation network, and the transaction costs evoked in the decision-making process (see Chapters 2, 3, and 4). Since the numerous identified problems are reflected in various aspects, it requires many corresponding strategies (policies) to deal with all the problems, which is difficult to achieve under the condition of limited resources. Therefore, embracing the concerns of importance and urgency, a strategic framework consisting of several top-priority strategies is proposed for tackling key problems and improving current decision-making (see Chapter 5).

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Based on the strategic framework developed in Chapter 5, in view of the government, the most essential and urgent need is to establish a supportive legal environment, which is the foundation of the whole framework. It requires the government to deliver a series of urban-renewal-related laws and regulations that provide legal guidance for the decision-making of urban renewal. These will address two needs. First, a programmatic document that clarifies the purposes of urban renewal in the macro view of urban development (e.g., detailed definition of public interest) needs to be included in the legal system. Second, by taking full account of local contexts, a series of specific laws and regulations can be formulated to make clear and detailed provisions on decision-making procedures, roles, and functions of participants, administrative, organizational structure, decision-making approach, and basis, etc.

On the basis of the supportive legal environment, it requires the improvement of the current organizational structure and cooperation mechanism. In order to reduce feedback loops and excess communications, a specialized urban renewal authority can be established to act as the main responsible body for urban renewal. It should belong to the government administrative system and make full use of administrative resources in urban renewal. Moreover, a new cooperation mechanism can be established to provide detailed guidance on how different stakeholders can effectively cooperate. It should include an information platform that transparently delivers information about the potential and designated projects, relevant government documents, sector requirements, and the dynamic decision-making process regarding all stakeholders.

The detailed urban renewal planning approach is also an important part of recommended policies. In the new approach, specific urban renewal planning for each designated renewal area should be developed as the outcome of decision-making and incorporated into the urban planning system. It plays the role of the programmatic document, which clarifies the boundary of projects, main objectives, timing, renewal modes, financial arrangement, compensation, and relocation. To support the planning, it requires a clear definition of the scope of factors that need to be well-considered in the planning procedure. Also, the evaluation system of the factors should be established.

Finally, a simplification of the decision-making process is required to facilitate the improved urban renewal planning approach, organizational structure, and cooperation mechanism. The optimized decision-making process consists of four major steps. The first stage is the preparation stage. The potential urban renewal areas should be searched and applied for urban renewal plans at the district level. The second stage is the urban renewal planning stage. Based on the detailed urban renewal planning approach and cooperation mechanism, at the district level, a

cooperative decision group with participation by the representatives of multiple stakeholders (including the in-situ residents) should be formed to designate urban renewal areas and develop relevant urban renewal plans. The third stage is the agreement and announcement stage. The urban renewal plans should be examined and approved at the municipal level and announced to the public for the agreement of in-situ residents. If the agreement cannot be reached, a further modification should take place returning to the second stage. The final stage is the post-evaluation stage. The project implementation should be dynamically evaluated by all levels of government and the public. If the plan cannot be implemented well in practice, it will also return to the second stage for further modification.

6.5.2 Recommendations for Future Research

This thesis specifically focuses on the decision-making of the redevelopment type of urban renewal projects in one city. This specificity poses some limitations on the external validity of the findings in a broader scope, such as rehabilitation type of urban renewal projects, some special groups of cities in China, or even global context. Therefore, in this section, a future research agenda is suggested.

First, more research on the decision-making of rehabilitation type of urban renewal projects is needed. Besides redevelopment, rehabilitation is also one main type of urban renewal projects. Contrary to redevelopment, rehabilitation brings speedy improvement of living conditions without demolishing existing buildings and relocating the residents in-situ. Compared to the redevelopment, rehabilitation costs less money, keeps the existing social network, preserves the heritage of the building style and neighborhood characters. It is also claimed to cause less harm to the environment (Ball, 1999, Ho et al. , 2011, Juan, Roper, 2010b, Power, 2008). Currently, most research about rehabilitation is related to the improvement of technology or management in the building scales (Juan et al. , 2010a, Ouyang et al. , 2009). Although the decision-making process of the rehabilitation-type project is partly overlapped with the redevelopment-type project, there are still many differences between them, especially the involved stakeholders and their perceptions. Little research has systematically explored the decision-making of rehabilitation type of urban renewal projects in China. Therefore, the deeper understanding of urban renewal decision-making in view of rehabilitation will be a useful addition to the knowledge base and provide the fuller picture of the field.

In this thesis, proposing a detailed urban renewal planning approach is considered as one of the key strategies to improve current urban renewal decision-making. This requires a clear definition of the scope of factors that need to be well-considered in the planning procedure. However, in most cities, except for some basic principles, currently, there is no strict and detailed decision basis for urban renewal. Therefore, in future research, the exploration of the decision basis of urban renewal is important. Indeed, there are numerous studies being done on the factors influencing urban renewal decision-making in various perspectives (Cohen, 2001, García, 2004, Ho, Yau, 2011, Kim et al. , 2005, Pritchett, 2003, Weber et al. , 2006). Nevertheless, most of them only focus on some specific aspects (e.g., building conditions) rather than adopting a holistic view. In addition, the majority of the research studies are rooted in cases of different countries. And few of them consider the situation in China. Therefore, it is important to take account of the characteristics of urban renewal in China and combine comprehensive factors to develop a detailed basis to guide urban renewal decision-making.

It is acknowledged that urban renewal involves large-scale public projects promoted by all government levels across various cities and regions in China. In addition to the general urban renewal decision-making, which is probed in this thesis, there are also a few unique decision-making systems in some Chinese metropolis cities, such as in the city of Shenzhen, Guangzhou, and Shanghai. Last but not least, it is therefore suggested that more comprehensive studies need to be conducted with regard to urban renewal decision-making, taking the case of different cities across China.

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Curriculum Vitae

Taozhi Zhuang was born in January, 1989 in Fujian Province, China. In 2012, he obtained his bachelor's degree in construction management at Chongqing University, Chongqing, China. He then started his master study at the same university. During that time, he involved in several consulting projects of urban (re) development and found his special interests in urban renewal. In 2015, he received a scholarship from China Scholarship Council to support his PhD research at the Department of Management in the Built Environment (OTB department 2015-2019), Faculty of Architecture and the Built Environment, Delft University of Technology in the Netherlands. In this PhD project, he has been working on the exploration of urban renewal decision-making in China. While preparing his PhD thesis, he has co-authored several journal articles.

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Urban Renewal Decision-Making in China: Stakeholders, Process, and System Improvement

Taozhi Zhuang

To meet the growing rigid demand of urban housing, urban renewal has played a significant role, which significantly promotes the urban prosperity in China. However, at the same time, many problems occurred through large-scale urban renewal projects. To avoid unintended consequences that occurred in urban renewal, how these decisions were made can be one key focus. To better achieve the goal of sustainability, this research aims to deepen the understanding of urban renewal decision-making in China and contribute to recommend strategies to improve the system. Based on the participatory decision-making theory and the characteristics of urban renewal, a conceptual framework is built to achieve the aim of this research. According to the research framework, this research firstly conducted an empirical study of stakeholders' expectations in urban renewal projects. Eighteen factors are identified and compared among the main stakeholder groups. Secondly, this research explores the stakeholders and their participation in the decision-making of urban renewal in China. Stakeholder Analysis and Social Network Analysis are complemented as the research methodology. In the third step, transaction costs theory is adopted to improve the understanding of urban renewal decision-making process in China. Based on the results of the above three steps, the last step of this research systematically determines a set of strategies for improving urban renewal decision-making in China by adopting the Analytic Network Process. The findings of this research add new knowledge on the exploration of the decision-making of public projects and can be directly adopted by the authority in practice.

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