



A Study on Urban Renewal Strategies of Shuozhou City, Shanxi Province, China Based on Stakeholder Theory and Social Network Analysis

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CASE STUDY

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ABSTRACT

China has undergone an unprecedented period of rapid urbanization in recent decades, resulting in a host of urban challenges. In response to these issues, urban renewal has emerged as a proactive policy approach to address urban problems. Urban regeneration is a multifaceted and multi-level endeavor that involves numerous stakeholders. Investigating the formulation of urban regeneration strategies in light of these stakeholders is pivotal for resolving societal issues and enhancing the comprehensiveness and feasibility of urban regeneration strategies. This paper employs Shuozhou City as a case study, using a combination of stakeholder theory and social network analysis to identify stakeholders in the context of urban renewal. It conducts a comprehensive stakeholder analysis, explores the social network structure among these stakeholders, and constructs an “impact-interest” matrix to capture their roles and interests. Based on this matrix, it proceeds to propose a range of dimension-specific urban renewal strategies for Shuozhou City. In conclusion, leveraging this matrix, the paper outlines specific strategies tailored to the urban renewal context in Shuozhou, exemplifying the potential for a more effective approach to addressing urban challenges.

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INTRODUCTION

Urban regeneration is an urban planning and development strategy that aims to comprehensively or partially transform, upgrade, or rebuild infrastructure, buildings, public spaces, and social and economic systems within cities (Jianqiang Cui et al, 2021). China has undergone an unprecedented, rapid urbanization process over the past few decades, with an annual growth rate of 2.86%. This has given rise to significant urban challenges, driven by a substantial influx of rural populations into cities, propelling rapid urbanization and economic growth. Consequently, it has led to the expansion of the current built-up areas within cities and the sprawl of urban boundaries (Lijie Huang et al, 2020). Many cities are grappling with urban issues such as land supply shortages, urban decay, and environmental degradation, prompting urban regeneration to be actively proposed as a policy approach to address these problems (Helen Wei Zheng et al, 2015). The primary objective of urban renewal is to enhance the urban living environment, foster economic development, uplift social well-being, facilitate sustainable development, and cater to the evolving demands of the city. Simultaneously, urban renewal can effectively resolve issues related to unbalanced and insufficient urban development, enhance residents' quality of life, and promote the sustainable growth of cities. The implementation of the urban renewal strategy breaks the mold of uniform city development (Zhiyong Yi et al, 2017).

Urban renewal is a intricate, multi-faceted endeavor that encompasses a wide array of relevant stakeholders (Taozhi Zhuang et al, 2019). In China, urban renewal is predominantly overseen by the government, yet, in practice, a slew of social issues has emerged due to an inadequate exploration of the competing interests among the various stakeholders (Yousong Wang et al, 2017). For instance, during urban renewal resolutions, original property owners and tenants often lack a corresponding voice (Yanpeng Jiang, 2020). Additionally, the relentless pursuit of commercial development projects can disrupt the continuity of the civic cultural framework (Zhou et al, 2017), while the involvement of community organizations in the urban renewal process can sometimes be insufficient, resulting in an imbalanced distribution of the benefits arising from the renewal (Xun Li et al, 2020). In response to these challenges, some scholars have sought to unravel the issue by conducting research on the roles played by various urban renewal stakeholders in decision-making. For instance, Vijaya Kumar Manupati (2018) proposed a multi-criteria decision-making method for urban renewal. Taozhi Zhuang et al (2019) collected data through in-depth interviews and questionnaires, delving into stakeholder relationships and deriving policy insights regarding stakeholder involvement in urban renewal decision-

making. Yunxi Bai (2023) explored the key factors affecting sustainable urban renewal from a multi-stakeholder perspective. However, to date, there have been few studies that have scrutinized the formulation of urban renewal strategies from the viewpoints of the diverse stakeholders engaged in the urban renewal process. Therefore, research into the development of urban regeneration strategies, taking into account the roles of the relevant stakeholders, is indispensable for resolving societal issues and enhancing the comprehensiveness and feasibility of urban regeneration strategies.

This study endeavors to put forth adaptive urban regeneration strategies from a stakeholder perspective, and it carries out empirical research in Shuo Zhou City, Shanxi Province, China, as an illustrative example. The insights derived from this case study can offer valuable guidance for decision-makers, enabling the formulation of pertinent urban regeneration strategies in Shuo Zhou City, factoring in the interplay between stakeholder influence and their degree of interest in the urban regeneration process. The experiences gained in Shuo Zhou can yield meaningful lessons for other Chinese cities seeking to propose and implement urban renewal policies in the future.

The remainder of this paper is structured as follows: Part II provides an introduction to the research background of the case study area. Part III outlines the research methodology. Part IV delves into the implementation pathways and associated strategies for urban renewal from the stakeholder perspective. Lastly, Part V offers concluding remarks and furnishes recommendations for future research.

BACKGROUND OF STUDY

The research area of this study is the core area of Shuo Zhou City, Shanxi Province, China. Shuo Zhou is located in the northwest of Shanxi Province (Figure 1), in the upper reaches of the Sanggan River, adjacent to Beiyue in the east, the Yellow River in the west, outside the Great Wall in the north, and Yanmen in the south. The landform outline is generally surrounded by mountains in the north, west, and south, with high mountains. The core area is located in the central area of Shuo Zhou City, with a total area of 30.02 square kilometers (Figure 2).

The urban core area of Shuo Zhou has a long history and profound culture. The city of Shuo Zhou has a long history with more than 2,000 years. It has been a battleground for the military since ancient times. It was built in the Qin and Han Dynasties, expanded in the Northern Qi Dynasty, and rebuilt in the late Yuan and early Ming Dynasty. In the Ming Dynasty, the north gate was called Zhensai Gate, the south gate was Cheng'en Gate, the west gate was Wuding Gate, and the east gate was Wende Gate. In 215 A.D., Qin Shihuang, founder of Qin dynasty, sent



Figure 1 Regional location.

Source: Shanxi Urban and Rural Planning and Design Institute.

General Meng Tian to lead an army of 300,000 to attack the Xiongnu in the north, where he built a city and raised horses. The city he built was called Mayi. In 1979, the historic handshake between Deng Xiaoping and Dr. Hammer gave birth to the Pingshuo Antaibao Open-pit Coal Mine, opened a new chapter in China's reforming and revolution, and laid the foundation for the birth of Shuozhou City.

The urban core area of Shuozhou has beautiful ecology and rich scenic spots. Shuozhou is located in the upper reaches of the Sanggan River and is rich in natural resources. In the core section of the city, Qilihe and Huihe have been built into Qilihe Park and Huihe Park. Qilihe Park forms an urban waterfront landscape area with beautiful ecology, rich cultural landscapes (e.g., the statue of Yuchi Gong inside and outside the park and the Han Tomb Museum). It has served as an "ecological and humanistic meeting room" displaying the city's image and charm. Pingshuo Park, i.e., the largest park in the living area of Pingshuo, serves as the first park in Shuozhou formed after the reform and opening up. Pingshuo Park has a unique landscape. The lakes in the park are the perennial habitats of rare animals. Moreover, the ecological environment is superior, and there is an endless stream of tourists. As an emerging urban park in Shuozhou, Shuozhou People's Park integrates the functions of displaying the city's image, receiving government affairs, and citizens' leisure. The magnificent library and museum are in the east and west, the news

building and the Four Seasons Pingshuo Hotel towering in the north. The magnificent surrounding of the park, with a broad square as its body, embraces the charm of natural vegetation, the luxurious atmosphere of modern facilities, and the substantial historical and cultural heritage, suggesting the characteristics of a modern open garden landscape.

METHODOLOGY

This study utilizes stakeholder theory and combines it with social network analysis to formulate strategies for urban renewal in Shuozhou City. Stakeholder theory, initially introduced by Freeman in 1984, aims to provide a practical approach to business management strategy, emphasizing the importance of organizations recognizing their stakeholders to achieve superior performance (André O. Laplume et al, 2008). Over time, this theory has found extensive application in various fields, particularly in projects, business, and management (Taozhi Zhuang et al, 2019). The key components of stakeholder theory involve human actors and their interactions in the process of value creation and trade within a dynamic world, primarily within the realm of the economy, but not exclusively so. This includes considerations of values, norms, and ethical congruence as mechanisms for efficient and effective prosperity both within and between organizations (R. Edward Freeman et al, 2018).

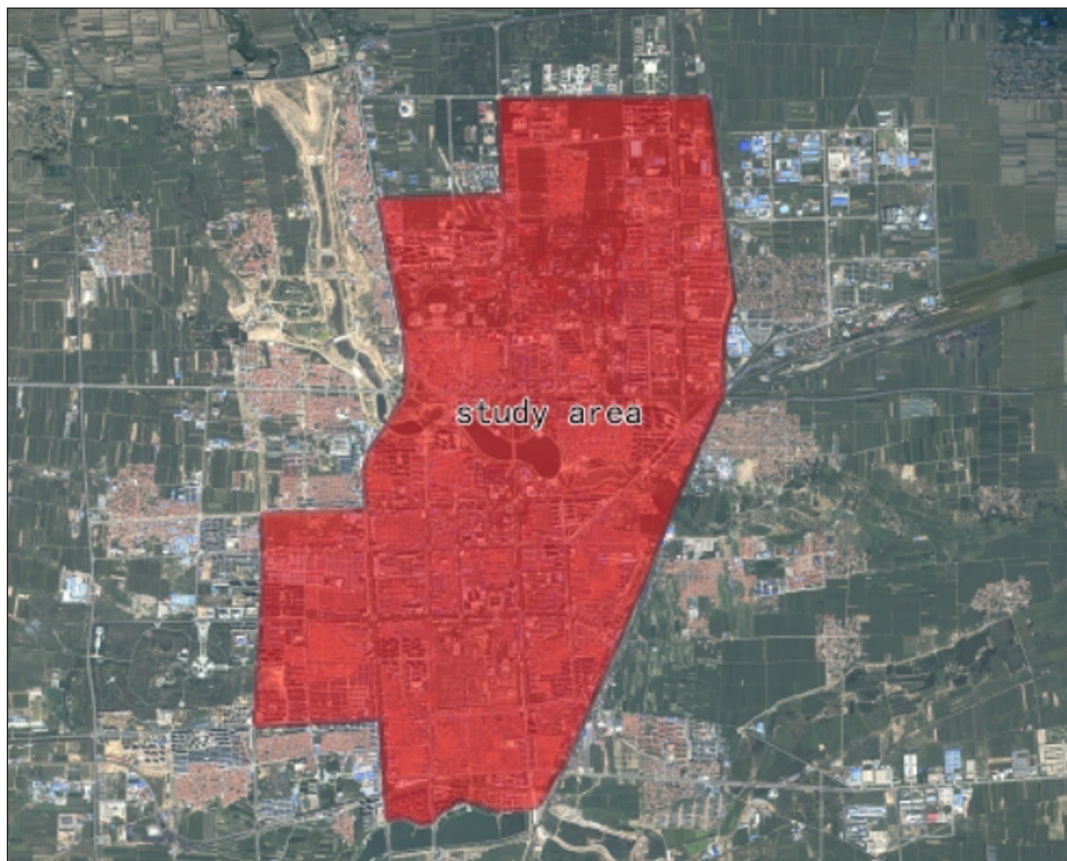


Figure 2 Area of study.

Source: Shanxi Urban and Rural Planning and Design Institute.

While stakeholder theory is widely applied in various fields, its academic rigor and practical effectiveness have been subject to scrutiny (Johanna Kujala et al, 2022). Presently, the realm of academic scholarship has seen the emergence of social networks, offering fresh theoretical perspectives and measurement tools for research in the social sciences (Kristine Valujeva et al, 2023). Social network analysis is a method employed to study interpersonal relationships and information flow, with broad utilization across various domains to aid in comprehending and resolving complex issues (Arman Ahmadi et al, 2019). However, this method has its limitations, including a heavy reliance on graphical representations and the use of mathematical and computational models. It excels in systematically demonstrating the existence of interactions but may fall short in explicating the underlying reasons for such occurrences (David Camacho et al, 2022). Many studies opt to combine stakeholder theory and social network analysis as analytical approaches, recognizing their complementary nature in exploring stakeholder systems (Caniato, M. et al, 2014). In this study, the innovative and cutting-edge integration of these two approaches in the context of urban regeneration research in China is poised to offer strategies for urban regeneration that harmonize equity and efficiency.

This study will employ the following steps to structure the research methodology (see Figure 3): it will identify

stakeholders through a combination of field research, literature review, brainstorming, and in-depth interviews. Subsequently, stakeholders will be analyzed, and a social network analysis will be conducted to establish the 'influence-interest' matrix of stakeholders involved in urban renewal in Shuozhou City. This matrix will serve as the foundation for crafting urban renewal strategies.

IDENTIFY STAKEHOLDERS

To commence, a comprehensive literature review method was employed, encompassing academic articles, policy documents, and news reports. This was done to gain insights into the historical context of urban renewal projects and to identify potential stakeholders. Following this, a multidisciplinary team was assembled in Shuozhou City, comprising urban planners, social scientists, and representatives from the city government. Brainstorming sessions were organized, during which team members were encouraged to share their perspectives and recommendations concerning stakeholders in urban renewal. Combining the findings from literature review and brainstorming, an initial list of stakeholders was compiled. Subsequently, based on the outcomes of the brainstorming sessions, a total of 20 individuals representing key stakeholder categories were selected for in-depth interviews. These interviews served the dual purpose of validating the stakeholder list proposed by the

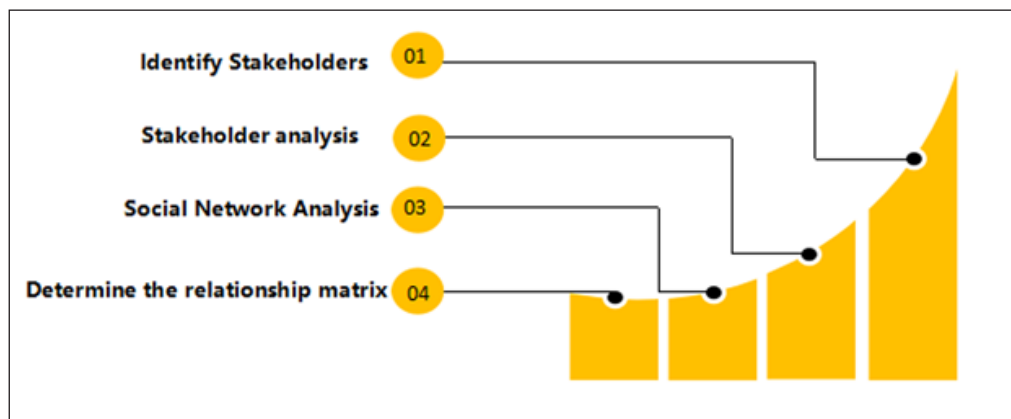


Figure 3 Research Methodology Process.

Source: Drawn by author.

interdisciplinary team and gathering valuable data for further analysis. In Table 1, you'll find a summary of the interviewees' profiles along with the questions they were asked. The in-depth interviews proved highly effective in both identifying and enhancing the understanding of urban renewal stakeholders. Consequently, six distinct categories of stakeholders in urban renewal were ultimately discerned, namely: policy organizations, political organizations, economic organizations, social organizations, steering organizations, and supervisory organizations, as presented in Table 2.

STAKEHOLDERS ANALYSIS

During the in-depth interviews, insights from the participants were notable. Interviewee G01 emphasized, 'The formulation of urban renewal policies, regulations, and guidelines by the higher government is the crucial first step for the preparation of our city's urban renewal plan.' Interviewee G05 expressed challenges faced, stating, 'Indigenous residents pose a significant hurdle, frequently obstructing project implementation. Disagreements on compensation have led to project delays.' Interviewee F01 shared, 'We find ourselves caught in the middle, with indigenous residents unwilling to yield, and the government imposing project completion deadlines. This work is undeniably challenging.' Interviewee R01 highlighted, 'Developers prioritize their own interests, often neglecting ours. Our reluctance to renew stems from the unfairness of shouldering the burden. We lack proper channels for grievances and remain in a precarious position.' Respondent R02 raised concerns, saying, 'Urban villages offer affordable rent, but with urban renewal, the prospect of unaffordable skyscrapers looms. What will become of us, the migrant workers, in this transformed city?' From these interviews, it becomes evident that many existing urban renewal strategies largely reflect government aspirations and insufficiently consider the diverse demands of each stakeholder group. The ongoing urban renewal efforts in Shuozhou City are faced with challenges related to the implementation

of existing strategies and the mediation of conflicting interests among involved parties. As a result, it becomes imperative to analyze the array of stakeholders comprehensively and devise strategies based on this analysis. Consequently, an exhaustive examination of all stakeholder types and the development of strategies grounded in this analysis hold significant research and practical implications.

The policy organization primarily comprises higher-level government departments responsible for formulating urban renewal standards and policy documents. Their role is to ensure that urban renewal projects adhere to legal and policy frameworks, promoting the overall development and enhancement of all cities within the region. The political organization mainly consists of the city government and relevant governmental departments. They are the key decision-makers in urban renewal for the city, with a central focus on enhancing the city's quality. Their aim is to meet the dual objectives of improving the city's image and the quality of life for its residents while driving sustainable urban development. Economic organizations, which include market investors such as banks and developers, play a pivotal role as the primary investors and executors of urban renewal projects. They pursue diverse economic, financial, and strategic interests in urban renewal. These interests encompass economic returns, land appreciation, diversified investments, brand reputation, market expansion, government incentives, social responsibility, and innovative opportunities. These pursuits often align with their business objectives and strategies and contribute positively to the overall city development. Social organizations are composed of indigenous residents, tenants, and other members of the general public. Their interests are directly affected by urban renewal, yet they may find themselves disadvantaged, lacking a voice, and expertise. This group might encounter conflicts and contradictions with other stakeholders, such as cultural differences, land rights, economic impacts, social consequences, and environmental effects. The steering organization comprises a team of experts

NO.	ROLE	WORK DEPARTMENT	BACKGROUND	ISSUE
G01	Government Staff	Shuozhou Municipal Bureau of Natural Resources	Responsible for urban planning for 20 years	1. Agree with the preliminary list of urban renewal stakeholders? 2. Supplement the list of urban renewal stakeholders not listed. 3. Do you identify yourself as a relevant stakeholder, and if so, what is the role you represent? 4. The interests of other stakeholders that one represents or is familiar with understanding in terms of management and politics, marketing performance, community interests, and portfolio. 5. What are the conflicts and win-win situations with other stakeholders? 6. Other open-ended questions related to urban renewal.
G02	Government Staff	Shuozhou Municipal Bureau of Natural Resources	Responsible for urban planning for 25 years	
G03	Government Staff	Shuozhou Municipal Bureau of Natural Resources	28 years in charge of land management	
G04	Government Staff	Shuozhou Housing and Construction Bureau	18 years in charge of urban construction and management	
G05	Government Staff	Shuozhou Housing and Construction Bureau	5 years in charge of urban renewal	
G06	Government Staff	Shuozhou Development and Reform Commission	Responsible for urban development studies for 23 years	
E01	urban planner	Shanxi Urban and Rural Planning and Design Institute	Project Manager of Shuozhou City Master Plan	
E02	urban planner	Shanxi Urban and Rural Planning and Design Institute	Responsible for more than 100 planning projects in Shuozhou	
E03	urban planner	Shanxi Urban and Rural Planning and Design Institute	Responsible for more than 30 urban renewal projects	
P01	professor	Zhejiang University	Top experts and scholars in land management research	
P02	professor	Zhejiang University	Leading experts and scholars in urban development research	
F01	investor	Urban Investment Company	21 years in urban construction	
F02	investor	developer	15 years in real estate development	
F03	investor	developer	30 years in real estate development	
F04	investor	China Development Bank	Feasibility and funding studies for urban renewal projects	
R01	resident	-	Residents of urban villages	
R02	resident	-	rents of urban villages	
R03	resident	-	Convenience Store Operator, Old Town Living Area, Sokolowo	
R04	resident	-	Residents of Pingshuo Living Quarter	
R05	resident	-	Shunyi living quarters residents	

Table 1 Interviewees Profiles And Interview Questions.

involved in urban renewal project planning and design. They provide research and policy advice related to urban renewal. These experts can derive multiple benefits from urban renewal projects, including financial returns, enhanced reputation, experience accumulation, and industry connections. The technical proficiency of the expert team directly influences the effectiveness of urban

renewal planning. However, it’s possible that the expert team may sometimes take a broader view of urban development, potentially neglecting concerns related to vulnerable groups. Supervisory organizations primarily encompass the Petition Office and the media. They serve as the overseers of urban renewal and work in the interest of society and the public at large.

TYPE	STAKEHOLDER	PARTICIPATION
Policy Organization	Ministry of Housing and Construction, Ministry of Natural Resources, Ministry of Finance, Shanxi Provincial People's Government and other higher government departments	Formulating guiding policies to direct lower levels of government to provide public services and protect the public interest
Political Organization	Shuozhou Municipal Government, Shocheng District Government and other government departments such as the Resources Bureau, Housing and Construction Bureau, and the Development and Reform Commission	The main decision maker and regulator of urban renewal projects, responsible for planning, approving and supervising the implementation of the projects.
Economic Organization	Market investors such as urban investment companies, real estate developers and commercial banks	Major investors and executors of urban renewal projects, investing in and constructing new buildings, infrastructure and commercial lots.
Social Organization	The general public such as indigenous people, neighboring residents, tourists, tenants, etc.	Direct and indirect impact groups of urban renewal projects, including housing, community environment, quality of life and social connections, etc.
Direct Organization	Urban planners, academics and research institutes, planning committees and other professionals	Participate in the planning and design of urban renewal projects, and provide research and policy advice related to urban renewal.
Oversight Organization	Represented by the Petition Office, the media, and the community	Shape public opinion and concern, and monitor the fairness and openness of urban renewal.

Table 2 Final Identification of Urban Renewal Stakeholders in Shuozhou City.

SOCIAL NETWORK ANALYSIS

What types of relationships do the various stakeholders in urban regeneration in Shuozhou exhibit? A comprehensive analysis of the social network is required. Utilizing the list of identified stakeholders, we construct a measure of the strength of stakeholder relationships in urban renewal, guided by existing literature and informed by expert opinions and data gathered through field research. This forms the foundational dataset for the stakeholder relationship matrix in urban renewal projects. Recognizing that the exchange of rights and interests in urban renewal projects takes on various forms, including rights assertion, financial transactions, and information exchange, it is imperative to incorporate both dimensions when devising the measurement index for the intensity of stakeholder relationships. Given the unique characteristics of urban renewal projects, this study employs the criteria of ‘the presence of formal contracts,’ ‘the existence of affiliations or direct financial flows,’ and ‘the occurrence of face-to-face communication, negotiations, or indirect affiliations’ as the basis for evaluating relationship strength. Values of ‘5,’ ‘3,’ and ‘1’ are assigned accordingly, taking into account that these three factors may coexist within a single relationship. This paper determines the final score by selecting the highest value based on actual research conditions and in-depth interview assessments (see Table 3). The urban renewal stakeholder matrix is then established in accordance with the assigned scores.

The six categories of stakeholders were further subdivided into specific 22 stakeholders, and their scores were transformed into binary values. The resulting matrix

was visualized using Ucinet 6.774 software to derive group centrality measures (refer to Table 4), illustrated in the urban renewal social network diagrams (see Figures 4 and 5).

METRICS	SCORE
Formalized contract	5
With direct affiliation or direct cash flow	3
There is face-to-face interaction, consultation, or indirect subordination	1
none	0

Table 3 Measures of Stakeholder Relationship Strength.

Analyzing Figures 4 and 5 alongside Table 4, it becomes apparent that various governmental departments, such as the city government, the Urban Renewal Authority (URA), and the Natural Resources Agency, exhibit strong connectivity within the network. The Ministry of Housing and Construction, being the highest level of urban renewal management, showcases robust intermediation capabilities, albeit without a high degree centrality. Due to its lower intermediation centrality score, it does not play a pivotal role in the transmission of information.

Urban planners, experts, scholars, and planning commissions display notable centrality as guiding entities for urban renewal. They collaborate closely with governmental departments to steer urban renewal initiatives. The media, having the highest centrality, serves as a prominent information conduit for urban renewal.

CLASSIFICATION OF STAKEHOLDERS	DEGREE	CLOSENESS	BETWEENNESS
Ministry of Housing and Urban Development	8.000	1.619	19.747
Ministry of Natural Resources	8.000	1.619	10.052
Ministry of Finance	6.000	1.714	10.052
Shanxi Provincial Government	9.000	1.571	9.742
Shuozhou City Government	15.000	1.286	7.598
Shocheng District Government	13.000	1.381	6.444
Shuozhou Housing and Construction Bureau	16.000	1.238	5.903
Shuozhou Natural Resources Bureau	16.000	1.238	4.062
Shuozhou Development and Reform Commission	11.000	1.476	3.640
Shuozhou City Investment Company	15.000	1.286	3.536
Real Estate Developers	14.000	1.333	2.612
China Development Bank	8.000	1.619	2.217
Aboriginal	13.000	1.381	2.140
Renter	9.000	1.571	1.890
Neighbors	11.000	1.476	1.525
Travelers	6.000	1.714	1.491
Urban Planner	17.000	1.190	1.491
Expert Scholars	18.000	1.143	1.310
Planning Committee	15.000	1.286	0.640
Petition Office	7.000	1.667	0.515
Media	20.000	1.048	0.248
Communal	13.000	1.381	0.144

Table 4 Group Centrality Measures.

Although the primary influencers of urban regeneration are the broader social masses, including aborigines, tenants, and neighboring residents, the visual representation suggests that they do not occupy central positions in the network. Evidently, local governments and influential scholars involved in urban renewal decision-making hold central positions within the entire network, whereas groups lacking knowledge and influence are situated at the network’s periphery. This pattern warrants careful consideration in future planning and decision-making.

RESULTS AND DISCUSSION

DETERMINE THE RELATIONSHIP MATRIX

This study underscores the complementary nature of stakeholder theory and social network analysis, emphasizing that the synergy between these two approaches brings fresh insights to urban renewal research. The stakeholder analysis in this study highlights the significant influence of administrative politics, particularly at the governmental level. Urban

planners, experts, and scholars exhibit relatively high centrality as they serve as the architects and proponents of urban renewal, although their intermediary influence, as observed in the Betweenness analysis, is comparatively weaker. In contrast, the media emerges as a potent intermediary with substantial influence in the urban renewal context. Notably, higher government departments, especially the Ministry of Housing and Construction, while occupying top-tier decision-making positions, find themselves marginalized within the network. Surprisingly, the analysis results reveal that the broader social masses, including residents and tenants whose interests are most impacted by urban renewal, occupy a marginalized position in the network. However, network analysis also unveils their indirect influence on the dynamics and direction of urban renewal.

Building upon these analysis outcomes, an ‘influence-interest’ matrix (refer to Figure 6) for urban renewal in Shuozhou City is established through the lens of stakeholder theory and social network analysis, categorized by stakeholder types. This matrix serves as the foundation for shaping urban renewal strategies in Shuozhou City.

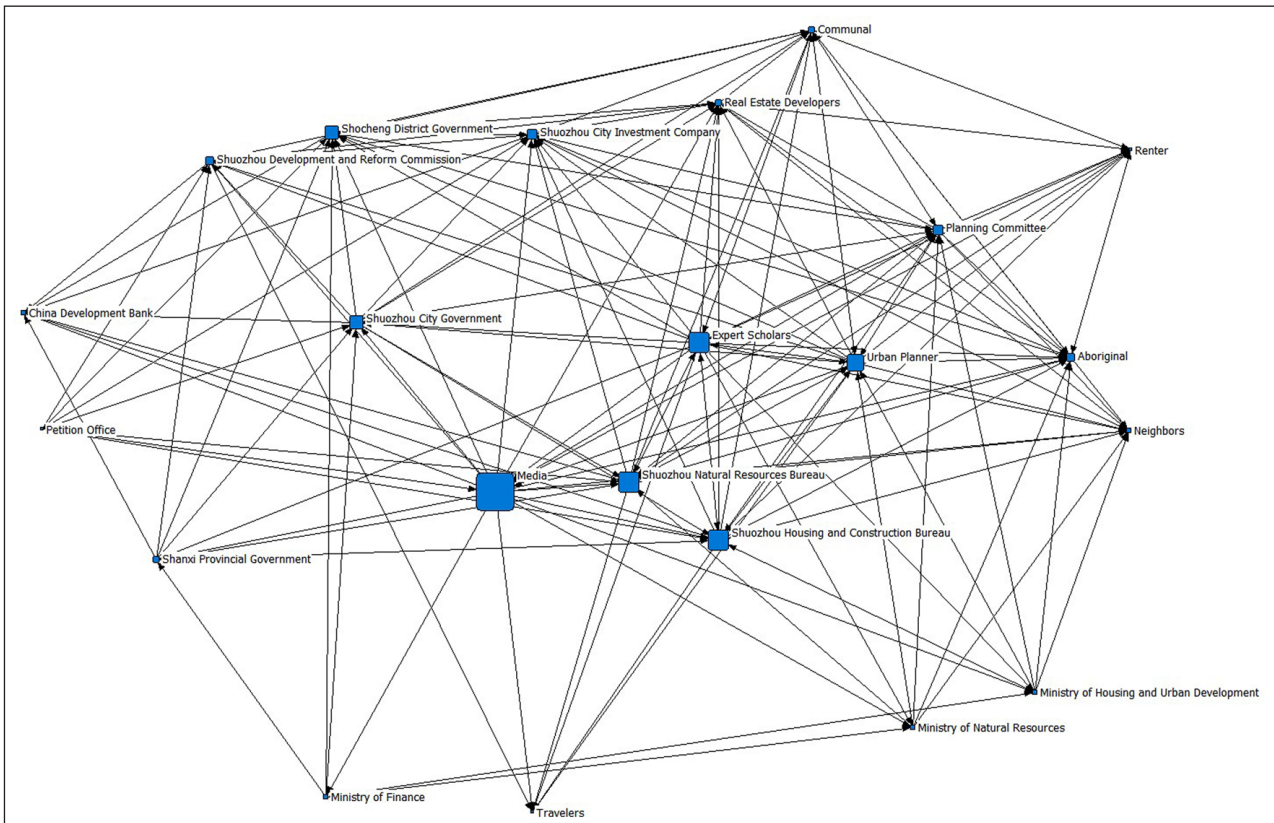


Figure 4 Stakeholder centrality diagram.

Source: Drawn by author.

FORMULATION OF URBAN RENEWAL STRATEGIES

Developing Urban Renewal Strategies Based on “High Impact – High Interest”

“High Impact – High Interest” is the key stakeholder of urban renewal, which is the political organization of Shuozhou City, i.e. the city government and its functional departments. For this type, it is necessary to implement the strategy of “Close Attention”, and develop the urban renewal strategy for the key areas of the city, which will be the first area for the government to show the image of the city. Three types of key sites, such as the four important streets, the city’s central axis, and the landscape corridors of the Chili River and the Chiu River, are considered as key areas of the city’s image (Figure 7), and are the first choice of the city of Shuozhou as a showcase area for urban regeneration.

Key Assets Development of Road

The development road connects vital functional areas. The development road serves as the core skeleton of the central axis of the city, which is updated synchronously in accordance with the central axis update strategy.

Minfu Street connects Shunyi living area, Pingshuo living area and Jingkai living area, connecting the east and west traffic gateways of the city, and is a comprehensive axis showing the modern style of Shuozhou. The major points of the update are the

transformation and upgrading of the old factory buildings in Pingshuo, the beautification of the streets of Hejiahe Village and Beixingjiahe Village, and the renovation of the drainage pipe network.

Shanyang Street connects the Yixi living area, the old city living area and the Yingbin living area. It is the urban landscape axis connecting the Xishan mountain landscape and the Taiping Lake wetland landscape, and it is also a comprehensive axis showing the conventional urban style of Shuozhou. The major points of the update are the adjustment of the road section, the setting of the parking lot, the beautification of the green belts on both sides of the road, and the beautification of the street style of Xijie Village.

Retain the texture of the old city, build the characteristic commercial pedestrian street of Nanbei Street, Beiguan Street, and create a historical street space. The major points of the urbanization development are to rectify the advertising plaques, set up shop advertisements and sunshade ponchos uniformly, demolish the existing illegal structures, adjust the abrupt advertising facilities, appropriately increase the advertising lighting, create a commercial block with a cultural atmosphere, and brighten the inner and outer sides of the city wall. Upgrade, add characteristic lamps to Wenchang Pavilion, Chongfu Temple, square, city wall and other nodes to form a night landscape light tour line.

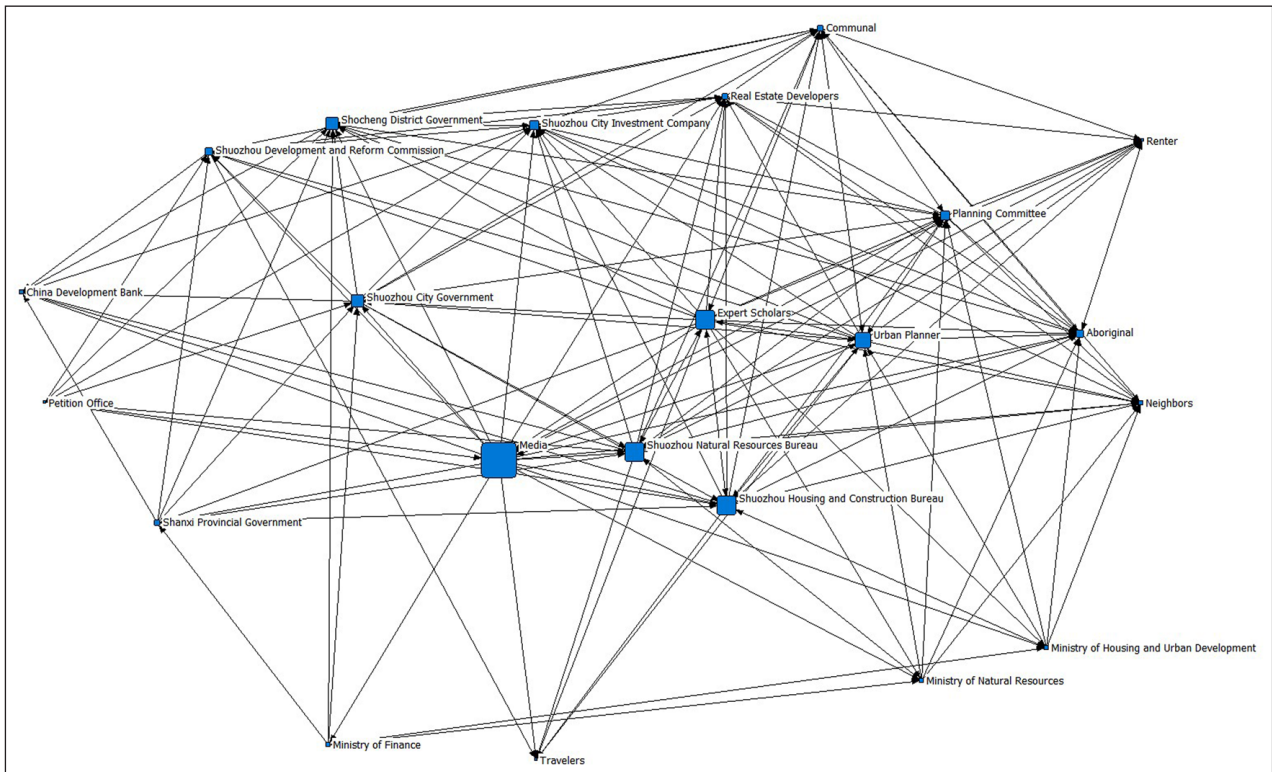


Figure 5 Stakeholder Betweenness Diagram.

Source: Drawn by author.

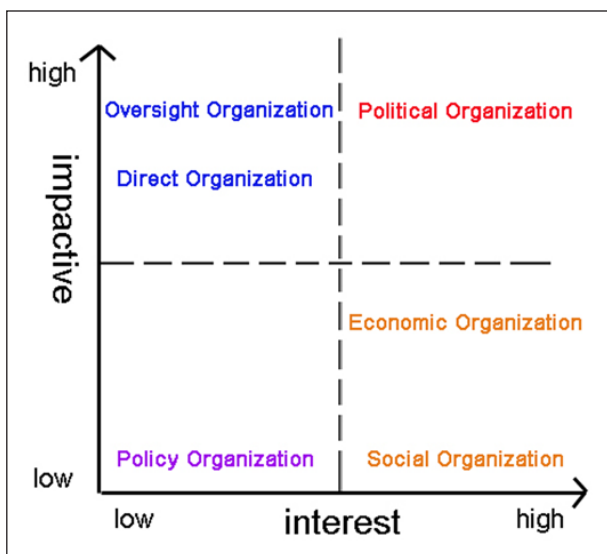


Figure 6 Shuozhou Urban Renewal “Impact – Benefit” Matrix.

Source: Drawn by author.

Urban Central Axis Update Path

Focusing on development, Zhangliao Road and Kaifa Road are the east-west boundaries to form a “city axis” in the core area. From the analysis of the spatial layout of the “city axis”, it can be seen that this axis tells the story of Shuozhou’s past and future. The splendid history of the old city of Shuozhou on the north bank of the Huihe River has created the prosperity of the city of Shuozhou. Based on this, it has gradually developed to the north. At the same time, the new urban center and

functional services have been continuously transferred to the north. For instance, as revealed by “People’s Park” and “Municipal Party Committee”, the respective change of the city’s administrative functions refers to a leap in the history of Shuozhou city. The “city axis” records the growth traces of the respective stage of Shuozhou’s rapid development, leads the continuous extension of the unique spiritual connotation of the city of Shuozhou, and indicates the yearning of the people of Shuozhou for a better life. Form the sequence guide of “origin”, “inherit”, “change”, “combine”, “continuation”, the Hui River is representing the mother river of Shuozhou and a vital factor for the origin and development of Shuozhou. In the future, with the construction of the Shuozhou high-speed railway station, this area turns out to be the southern entrance and exit of the city. The update focuses on the shaping of the waterfront landscape of Huihe Park, the improvement of city entrance signs and road landscapes. In the sequence of “change”, with the ancient city of Shuozhou as the core are, a conventional life group integrating leisure sightseeing, business, culture, and popular science is created. The update places a focus on improving the style of the ancient city of Shuozhou, the surrounding style of the ancient city of Shuozhou, as well as the streets of Beiguan Road. As the sequence of “change”, the urbanization development can be relying on the Qili River, by building a waterfront leisure group that focuses on leisure and sightseeing and has both commercial services and business office functions.

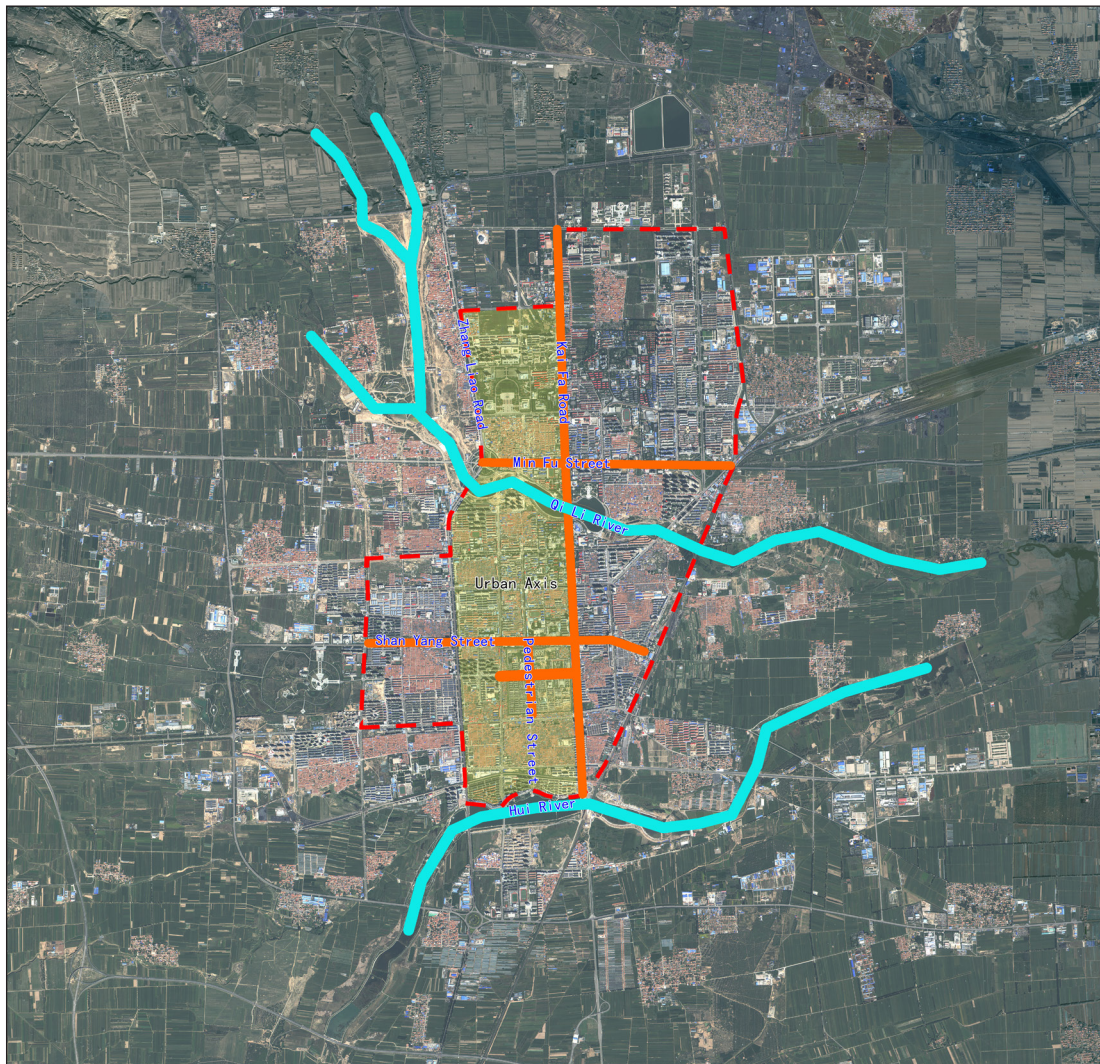


Figure 7 Key areas.

Source: Shanxi Urban and Rural Planning and Design Institute.

The update focuses on the enhancement of the style of Qilihe Park and the improvement of the style of the waterfront commercial and leisure buildings. In the sequence of “combine”, with the People’s Park as the core, an urban complex central area integrating administrative offices, commercial services, cultural leisure and exhibition functions will be built. The focus of the update is on the construction of commercial complexes, the renovation of landmark buildings, and the renovation of North Xingjiahe Village.

In the sequence of “continuation”, relying on the construction of cultural facilities such as science and technology museums, it will form the “cultural center” of the city and drive the development of the area into a new urban area integrating cultural exhibitions, life and commerce. The update focuses on the construction of science and technology museums, commercial service facilities, and street style renovation (Figure 8).

Update path of Waterfront Corridor

In general, “Waterfront Green Corridor” conforms to the construction of hydrophilic revetments, urban squares,

public green spaces, and other public spaces, combined with the layout of public activity centers and the organization of public activities, to moderately guide the construction of riverside commercial and leisure functions. In combination with urban activity arrangements and path design, providing continuous and smooth walking and slow-speed traffic paths along the passage; combine with the shaping of the waterfront strip landscape, fully display the natural features, and use the natural environment to create a relaxed and pleasant hydrophilic space. Through the creation of the “waterfront green corridor”, the spatial landscape connection between the urban hinterland and the river will be strengthened, the urban quality will be significantly improved, and a beautiful urban living room will be formed.

In combination with the water landscape of the Qili River, a residential, commercial, and financial, business office, leisure and entertainment area will be built along the river. The core area is a comprehensive functional section, and a modern urban service center is built around the green heart of Zhangliao Road Interchange, integrating functions (e.g., waterfront business offices,

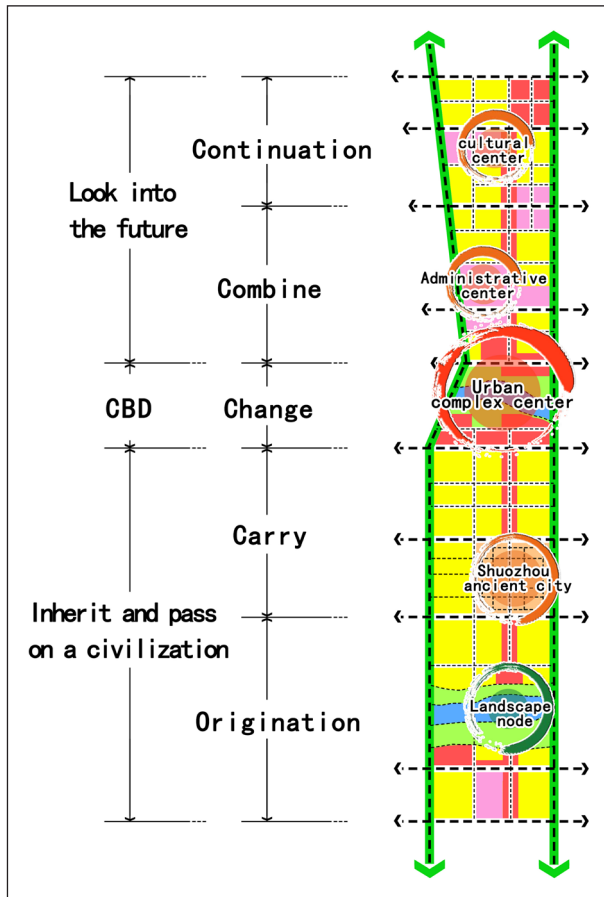


Figure 8 Urban Central Axis Renewal Diagram.
Source: Shanxi Urban and Rural Planning and Design Institute.

administrative and cultural centers, as well as old city business and trade service centers). The major point of the update is the second-phase project of comprehensive management of the ecological environment of the Qili River, comprising land acquisition and demolition, dredging, embankment slope protection, dam, greening and construction of roads around the lake.

Combined with the water landscape of the Huihe River, a residential, commercial and trade service, leisure and entertainment area will be built along the river. It falls into comprehensive functional section, rural living section and ecological leisure section. To be specific, the comprehensive functional section is built around the Beijing Cyberport, with the aim of building a business service center integrating the functions of residence, business office, culture, education, leisure and entertainment. The major point of the update is the formation of continuous interfaces on both sides of the Huihe River.

Developing Urban Renewal Strategies Based on “High Impact – Low Interest”

“High Impact – Low Interest” is the monitoring and guiding organization in Shuozhou City, which mainly consists of the media and other monitoring organizations, as well as professionals such as urban planners, experts

and scholars, who generally do not take the initiative to exert their influence as long as their basic interests are not compromised. Therefore, the “satisfy them” strategy is applied to this type. In this type, the monitoring organization represented by the media is the best publicizer of urban renewal, and the guiding organization is the professional of urban renewal, and the balance between the two lies in the maximization of the characteristics of urban renewal for the publicity of the media and the technical level of the professionals. Based on this, the urban renewal projects in the central city of Shuozhou are selected as typical areas for the media to publicize and for professionals to demonstrate their skills.

Focusing on the east, west, south and north streets of the old city, guides the concentration of conventional business functions and enhance the vitality of the old city. Inheriting the texture of historical streets and alleys, arranging furniture and sketches with historical and cultural characteristics, and turning the North and South Streets into a characteristic commercial pedestrian street.

With the stress placed on the construction of the “city axis”, the functional structure of the city will be optimized in depth, and a clearer focus can be placed of urban development. Moreover, through the organic connection between the “city axis” and the major functional areas of the city (e.g., the East City Sub-center, the North City Sub-center, Pingshuo Living Area, Economic Development Zone, Jinsha Botanical Garden, Sports Center, as well as Taiping Lake Wetland), the horizontal function of its functions can be achieved. Extension and expansion are conducted, with the aim of continuously strengthening the leading role of the city center and ultimately driving the rise of Shuozhou as a whole (Figure 9).

Developing Urban Renewal Strategies Based on “High Interest – Low Impact”

“High Interest – Low Impact” is the social masses and economic organizations whose interests are highly related but lack of voice, although their influence is low, their interests are high, and they may act aggressively to protect their own interests at certain times, therefore, in urban renewal, we should pay attention to the areas in which they actually live and the areas in which they can maximize the value of their investment, and adopt the strategy of “full negotiation” to carry out urban renewal.

According to the “Planning and Design Standards for Urban Residential Areas”, the provision of supporting facilities for 15-minute living circles, supporting facilities (e.g., junior high schools, primary schools, as well as nursing homes), using big data to crawl POI facility data points, and nuclear density analysis to obtain facility density distribution. After analyzing the accessibility of the traffic network data service scope, the 15-minute service scope is divided in to Shunyi, Pingshuo, Jingkai, Qilihe, Yixi, Laocheng, Yingbin, and Huihe in accordance with the current road network. To be specific, the public

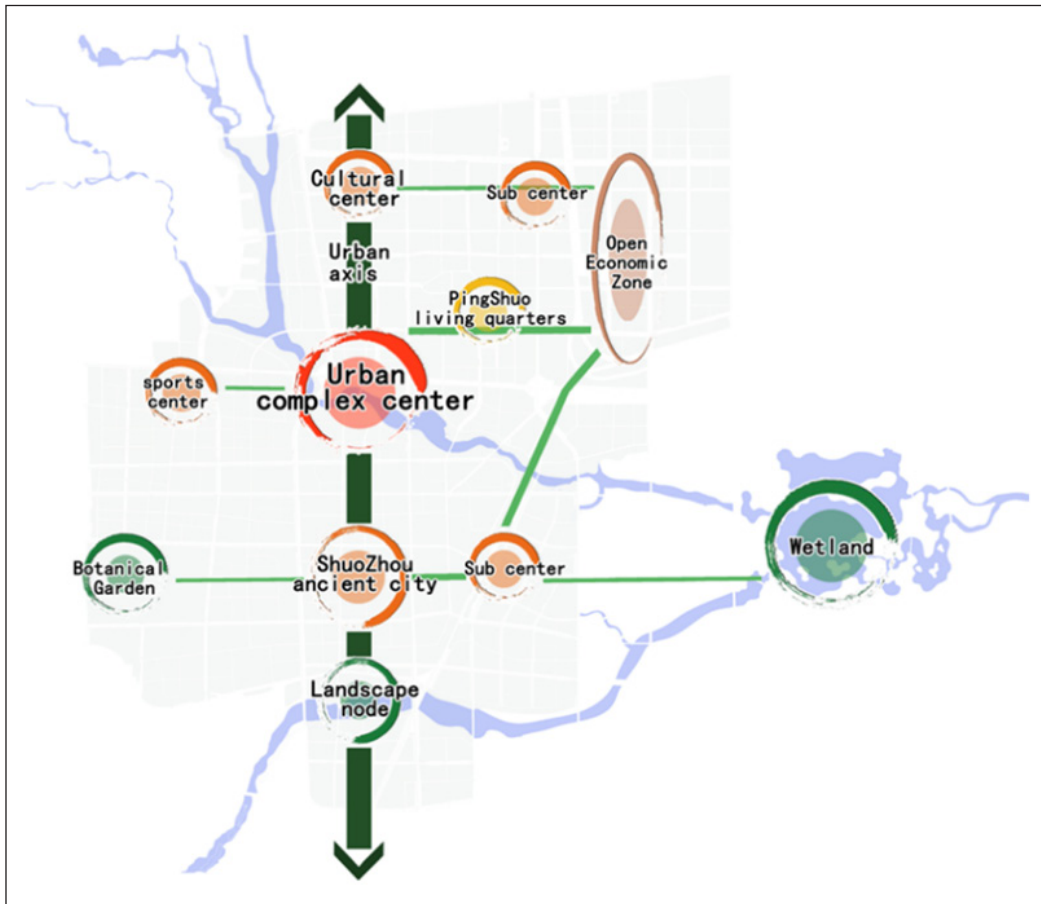


Figure 9 Distribution map of characteristic projects of “City Central Axis”.

Source: Shanxi Urban and Rural Planning and Design Institute.

service facilities in Qilihe and Huihe areas need to be improved. As revealed by the above analysis, the planning of the service scope of the fifteen-minute living circle is scientific and reasonable, which meets the basic needs of residents’ living, and provides a basis for the planning of the renewal unit (Figure 10).

With the living area of Pingshuo as the core, relying on the important areas (e.g., Pingshuo park, administrative office area, resort area, and ShuoZhou gymnasium) to create a “model area” for a happy life in ShuoZhou, showing the era of ShuoZhou’s reform and opening up and industrial civilization. Focusing on strengthening residential services and cultural display functions. The major point of the update is to improve the living environment of Pingshuo living area.

Relying on the ShuoZhou Economic Development Zone, it is imperative to optimize the urban service function and incorporate functions (e.g., scientific research and development, and incubation), with the aim of creating a demonstration area for the integration of industry and city. The major points of the update refer to revitalizing inefficient industrial land, implant functions (e.g., technology research and development, as well as incubation), improving community public service facilities, and increasing open spaces (e.g., pocket parks).

Around the Qilihe Park, an ecological landscape cultural corridor is drawn, with blue and green interweaving, exhibiting ancient and modern characteristics, displaying the style of Sangyuan and inheriting the charm of ancient towns. A focus should be placed on expediting the demolition and reconstruction of Hejiahe Village and small villages, implant modern living, business finance, leisure and entertainment and other functions, forming a dialogue space between the old city and the new district of ShuoZhou, and creating the “most beautiful living room” in the core area of the central city. The major point of the update refers to the renovation and upgrading of small villages, focusing on residential functions. For spatial layout, a focus is placed on building a spatial axis with Beiguan Commercial Street and the old city, such that a theme corridor of “city heritage” is formed. In general, for residential and business functions, the spatial layout aims to echo with the waterfront of the Qili River.

Focusing on living and living functions, it will focus on promoting the renovation and renewal of Caoshahui Village, improving the city’s comprehensive business and supporting service functions, and forming a modern ecological livable community. The major point of the update is the renovation, upgrading and reconstruction of Caoshahui Village, focusing on residential functions and improving living facilities.

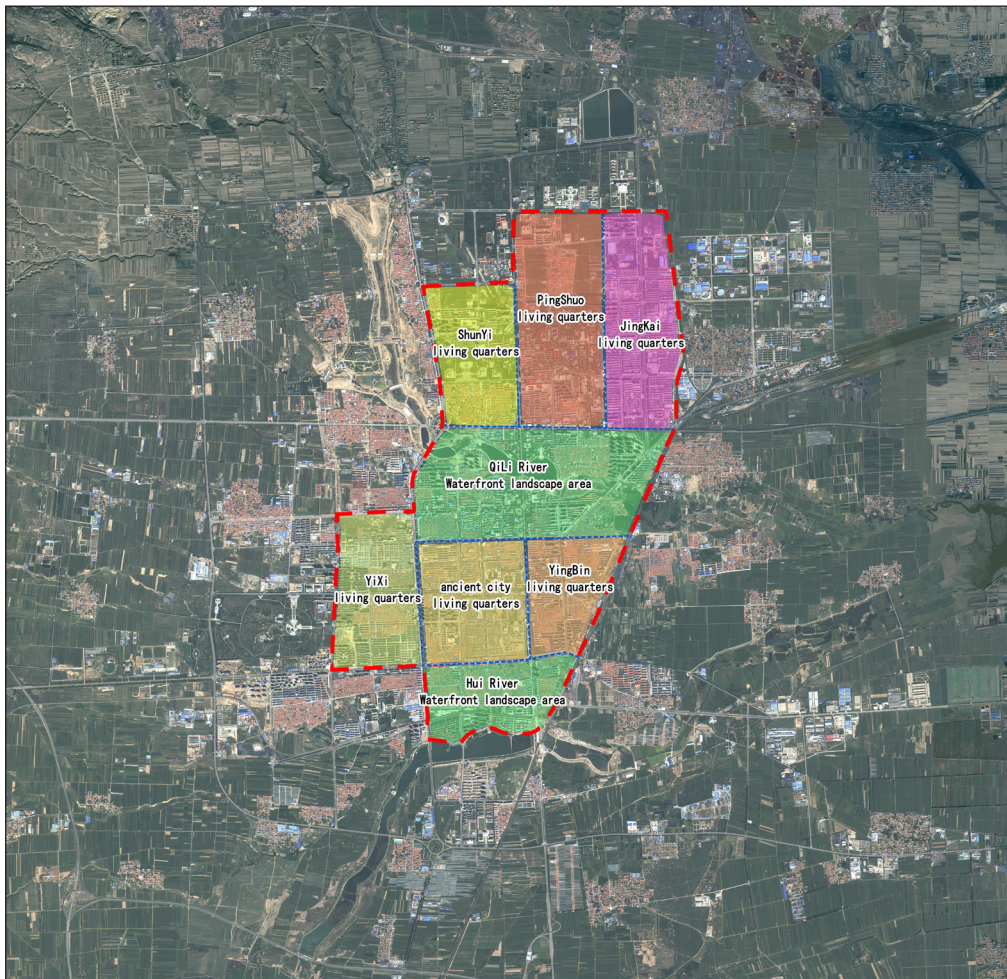


Figure 10 Urban renewal unit division layout map of the core area.
Source: Shanxi Urban and Rural Planning and Design Institute.

The texture of the old city is preserved, and the historical culture and conventional regional characteristics of Shuo Zhou are displayed, with historical relics (e.g., Chongfu Temple and the ancient city wall) as the core, relying on historical nodes (e.g., Mayi Museum, Wenchang Pavilion, and Confucian Temple). A focus is placed on strengthening the commercial and leisure functions of the old city and reproducing the charm and vitality of the old city. The major point of the update refers to restoring the north, west, and east gates, keeping, renovating and demolishing old buildings and restoring the ancient city wall. The specific methods are to implant creative cultural functions, enrich functional formats, activate the cultural connotation of the old city, plan several cultural festivals and activities, and tell the story of Shuo Zhou well. Furthermore, combined with the distribution of commercial outlets in the old city, efforts will be made to build a characteristic commercial pedestrian street from Nanbei Street to Beiguan Street, and a horse road around the city will be constructed along the ancient city wall to relieve internal traffic pressure.

From the core of comprehensive services of the railway station, build a functional area integrating business

services and transportation distribution, and form the external display window of Shuo Zhou. The major point of the update is to focus on the renovation and improvement of Dongguan Village and pay attention to the spatial echo of the old city of Shuo Zhou. A belt park on the north side of Dongguan Street was added to build a greenway themed “City Vessel Inheritance”; Zhanqian Road was extended south to Dongguan Street to form a ring line of the square in front of the station; combined with the renovation and reconstruction of Dongguan Village and Hujayao Village, it is effectively organizing the “Wuchakou” between Gubei Street and Jianshe Road.

With the ecological management of the waterfront and shoreline of the Huihe River as the core, a green residential community integrating commercial services, education and residence will be built. The land layout echoes the Huihe River and the old city, forming an urban foyer that reflects the natural and cultural landscapes. The major point of the update is the renovation and upgrading of Nanguan Village. Relying on Nanguan Road, a spatial axis connecting the old city and Huihe Park is formed, forming an urban green corridor, extending Nongxiao Street to South Kaifa Road and widening Nanguan Road.

Developing Urban Renewal Strategies Based on “Low Interest – Low Impact”

“Low Interest – Low Impact” is a policy organization formed by the higher levels of government and related departments. This type of stakeholder is basically free from conflict and only needs to adopt the strategy of “implementing according to the rules and providing immediate feedback”.

CONCLUSION

This study uncovers the ‘Impact-Interest’ dynamics within the network of stakeholders involved in urban renewal in Shuozhou City. It illustrates the effectiveness of combining stakeholder theory and social network analysis in urban renewal research, particularly in the formulation of strategies tailored to the diverse stakeholders. The social network within the realm of urban renewal in Shuozhou City is characterized by a high density of connections and robust linkages. The intricate relationships among stakeholders predominantly revolve around two main levels, namely government and investment organizations, with oversight bodies, represented by the media, bridging the gap between policy organizations and social entities.

While stakeholders pursue their interests through varied participation methods, resulting in an array of relationship types, attributes, and governance outcomes, common challenges persist in the governance of urban renewal at this stage. These dilemmas include striking a balance between the efficiency of revitalization and the extent of public involvement, the decentralization of local governments, and the pressing need to enhance public participation. To address these challenges, a social network perspective can guide multiple stakeholders towards optimal urban renewal governance solutions through effective communication and negotiation.

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The authors have no competing interests to declare.

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