



Research article

Land use change, policy dynamics and urban governance: A case study of urban village redevelopment in Shenzhen

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Abstract: Urbanization in China is a complex process. The expansion of urbanization has pushed the government to tackle the long existed rural/urban divide by redeveloping urban villages. However, not many studies have focused on the relationship between urban redevelopment and urban governance in relation to specific policy elements, that is, how land use change and policy dynamics reinforce urban governance. By conducting a case study of urban redevelopment in Shenzhen, this article first evaluates the redevelopment background, theoretical perspectives on land use and the policy context of urban villages. Based on the analysis of the case, it was concluded that land use change has played a significant role in urban governance, in which the policy dynamics of urban villages in China are crucial to understanding the redevelopment process. Findings show that an integrated approach was adopted to redevelop the village, which combined both government and community forces. Furthermore, the forces of land use change and the policy dynamics manifested in a co-management process engaged by stakeholders, and eventually reinforced urban governance.

Keywords: land use; policy dynamics; urban governance; urban village redevelopment; China

1. Introduction

In the four decades since the Open Up and Reform, China has experienced rapid urbanization. As a result, large scale redevelopment projects have been implemented in many Chinese cities and areas of infrastructure and commercial housing development [1]. In this process, China has witnessed the emergence of a unique urban form known as an urban village [2]. A Chinese urban village is

conceptually different from a Western urban village. Generally speaking, in many cases, urban villages in Western countries refer to neighborhoods that have been well planned and designed [3]. On the other hand, urban villages in China are not formed and developed through well-planned urban planning [4]. Chinese urban villages refer to rural villages surrounded by urban landscapes that are in the process of urbanization and whose land ownership and governance structure have not changed. Compared with other developed urban areas, urban villages in China are in greater need for redevelopment [5]. Unlike urban communities, urban villages are highly mobile, lack certain infrastructure and public services facilitates, and pose certain security risks. In 2023, the State Council emphasized that urban villages with urgent needs of residents and many hidden dangers in urban safety and social governance should be the focus of redevelopment. Theoretically and legally, urban development in China is based on two types of land ownership: state land owned by states and collective land owned by village collectives [6]. However, in practice, collective land has played a significant role in the urbanization and development of urban villages. Thus, the redevelopment of collective land has been practiced to sustain urban development. With the high cost of site redevelopment and reconstruction, institutional transformation is a common approach to solving these problems. One common approach is to redevelop urban village redevelopment by granting urban administration to integrate urban and rural society. Consequently, urban villages are created by land expropriation, in which the farmland of villages is requisitioned and used for urban redevelopment [7]. Even though urban redevelopment has been extensively discussed in literature, few studies have focused on its impact on urban governance (see [8]).

Since the 1990s, increased scholarly attention has been given to the urban village phenomenon. Early work has focused on the characteristics of urban villages, which are identified based on social networks [9,10]. More recently, research has been conducted on the emergence of urban villages and land redevelopment, such as property rights over collective lands and land use support [6,11]. For example, the existence of urban villages made it possible for migrants to make a living in cities [12]. Similarly, [13] argued that the development of urban villages has been an important part of China's urbanization process. [6] adopted the perspective of New Institutional Economics to examine urban redevelopment and found that the relationship among the government, village collectives and the real estate developers has been redefined by institutional arrangements in land property rights. This change has gradually promoted land redevelopment activities. Findings of these studies suggest that urban villages are effective in providing affordable housing for rural migrants so that it deserves a certain degree of tolerance of the existing problems. Due to the institutional transformation, a unique governance space has been produced. In particular, the commencement of urban land reform has enabled stakeholders to share profits in the land economy, which is perceived as the main driving force to facilitate the redevelopment of urban villages. In this sense, the transformation in urban development provides a great opportunity for researchers to explicitly examine the dynamics, as well as the interplay of stakeholders in urban village redevelopment.

Existing studies have examined both the positive and negative effects of urban villages. On one hand, the existence of the urban village seems to be considered as a thorn in the side by local administrators. Since most residents in urban villages are low-income migrant workers, they are excluded from the urban service provision system, which generates a series of problems that need to be solved in order to advance urban redevelopment. On the other hand, urban villages also serve a purpose [4]. For instance, urban villages should be allowed to exist for a longer time because they provide a shelter for the low-income population who settle in the urban village [14]. These studies have provided insights into understanding the process of urban redevelopment in terms of policy

setting, institutional change and the living conditions of residents in the urban village. However, the dynamics of a transitional neighborhood remains an area less examined in the current literature. It is important to examine the dynamics in order to understand the nature and functions of the urban village, and thus inform policy making in future urban redevelopment. Driven by this unsolved question, this article aims to extend the current understanding by linking land use, the policy dynamics and urban governance in understanding urban redevelopment in China. Since the urban village is a unique form of urban neighbourhood, it is necessary to understand its social-economic and policy conditions accompanying urban transition. To some extent, the urban village can be perceived as a community of stakeholders having different interests. Due to the ambiguous property rights, it is difficult to achieve transformation within a short period of time. With great emphasis on the perspective of land use change, property rights redistribution and traditional culture norms, this article adopts a comprehensive perspective to examine the transition process of urban villages by arguing the “moderating” role of the policy variable. Drawing on fieldwork in urban villages in Shenzhen, the article addresses the following issues: the evolution of land use in urban villages, the policy setting of urban redevelopments and its impact on urban governance. Particularly, it examines the dynamics of the transition process by answering the following questions: how did urban villages evolve into urban neighborhoods? What are the changes made in the process of urban redevelopment? How did the urban village redevelopment impact urban governance? The answers to these questions can potentially advance the current understanding of urban development in China. Additionally, empirical findings from this study may contribute to theory development about the evolution of the urban village.

The article is organized as follows. First, it provides a general introduction to the urban village phenomenon in China in relation to the land use system. The introduction is situated in the context of urban redevelopment. Second, theoretical perspectives of urbanization and land use are illustrated to understand why the government adopted a comprehensive strategy of urban redevelopment. Then, the method used in this study is presented, which includes a brief presentation of the study area and the rationale for case selection. Next, the case analysis of the transition process of the urban village is elaborated. The purpose is to explore the impact of land use change and policy dynamics on urban governance. By analyzing the transition process of a specific village in Shenzhen, critical conditions for urban village redevelopment are identified. Findings of the case study are provided and further discussed. In the end, this study provides policy guidance and implications for future urban development.

2. Urbanization and land use in urban villages: a critical review

2.1. Urbanization in Shenzhen

Urban villages in China are the outcome of urbanization under this dualistic urban/rural structure [15]. As a result, cities have been surrounded by villages as urbanization continues to expand. To sustain urban development, administrators choose to acquire agricultural land from peasants given the cost of acquiring land being relatively high. Therefore, under this circumstance, many traditional villages are geographically encircled by newly built-up urban areas.

Under the high-speed urbanization process in China, the advent of urban villages is seen as an urban economic solution to the consumption-based demand [3]. In literature, urban villages are considered to have both positive and negative impacts on urban development. At the very beginning, urban villages were perceived as the dark side of urban development mainly because of its unregulated

expansion. Moreover, the ambiguous status of rural land has resulted in complex land rights. Due to inadequate infrastructure of urban villages, the development of these villages turned out to be unsustainable. However, the “dirty” image of urban villages began to change after the year 2000. The reality that urban villages, to some extent, has provided a feasible settlement for those migrant workers and indigenous villagers has been recognized. In addition, urban villages can help fill the gap of the dichotomy rural-urban system [13].

The initial spatial development of Shenzhen occurred through utilizing pre-existing rural areas [14]. In 1979, the city government began to acquire land from the village collective for the purpose of developing urban areas. Due to limited financial budgets, the government decided to return a small portion of the acquired land to the village collective in the name of compensation. The returned land was utilized for economic development and most of the village collectives were planned to build commercial buildings to generate profits. After years of accumulation, the village collective economy has enhanced rapidly; this has sustained the growth of urban villages in Shenzhen. Basically, urban villages in Shenzhen were established based on consanguineous and geographical links. In other words, these villages are greatly shaped and influenced by traditional cultural and social norms. In practice, it is community share-holding companies, transformed from village economic organizations, that are responsible for providing public services and other benefits to villagers because the social insurance of villagers has not been incorporated into urban social welfare programs. Since the 1990s, the land price has shot up; consequently, the real estate market in Shenzhen began to rise. Driven by these forces, the urban village continued to develop, during which, intensive construction was implemented. The increased price of the real estate has further stimulated the development of housing and other relevant industries. Eventually, Shenzhen successfully made the transition from a rural society into a highly developed industrial-based city.

2.2. Theoretical perspectives of land use

Earlier work on urban studies focused on the multifunctionality of cities [16]. More recently, increased attention has been given to the land use in urban cities in terms of its function, structure, and diversity [17–19]. As cities evolve, many activities have been clustered together. Thus, the mix of urban functions enhances the efficiency of urban management, in which labor, knowledge and products are utilized [19]. Gradually, the places where people live and work are situated in parts of the city [20]. This is how cities become multifunctional. As new technologies are increasingly adopted in urban development, studies on urban sustainability regarding sustainability measurement, policy-making and urban resilience emerge [21,22]. A central argument has been that the expansion of cities is associated with multifunctionality, urban forms and land use.

Existing studies on land use are mainly centered on urbanization, in particular, housing development [23–25]. In Chinese urban villages, the land use system differs from that of urban residential communities because they are excluded from urban planning [19]. Consequently, the land in urban villages turned out to be largely unregulated and uncontrolled. Due to the land use flexibility, indigenous villages can use the land for profit-making. For example, the land-use development enables villagers to either rent their houses for profit or to develop other facilities for different purposes. As indicated by the current research, the underlying reason is the dual land system, which generates many urban villages. In the process of urbanization, a significant change has taken place in the rural land use system, that is, land transformation from rural collectively owned land into state-owned land. Since

the establishment of the People's Republic of China in 1949, the state has started to deny private land ownership, originally possessed by landlords [26]. Instead, the state introduced the collective ownership of rural land [27]. Based on the collective ownership system, the land in the scope of production team is possessed by the production team and the entire land is not allowed to be sold or used for renting purposes [28]. This means that the collective land is forbidden to be transferred on the market. In the meantime, laws and regulations have been made to prohibit the sale of rural housing. However, it did not effectively prevent the transaction of rural housing in practice. After nearly 20 years, the land property rights have evolved to the Household Contract Responsibility System (Jiating lianchan chengbao zerenzhi). Under this system, the land ownership remains "collective", but the farmers were granted with the rights of using agricultural land [29]. Previous reforms have informed that land development has changed the type and intensity of land use in a city [7].

In 1987, the national land reform was initiated in China, the results of which was that urban land had been turned into a commodity that could be traded on the market [14]. As a result, land prices have been rapidly increased and the real estate market started to boom. According to [30], a site has the potential to capitalize on a given land use. This means that if the site enjoys a good location, then it is very likely that the land can generate considerable profits. In the case of China, an urban land is created by selling land use rights. Therefore, the emergence of urban villages can be understood as one consequence of the evolution of the land use system. As urban villages continue to urbanize, the physical and social landscape have been shaped. The transition from rural villages to urban ones has demonstrated a complex process that involves a dynamic matrix of forces. To summarize, the land use change has been a critical factor of urban redevelopment. It not only changed the way in which public services are delivered in urban villages, but also shaped the structure of urban governance through phases of reconstruction and redevelopment.

Therefore, the land use in urban villages differs considerably from other urban areas. Due to institutional accounts, the land use in urban villages is quite diverse. In the process of urbanization, a main feature is the fast land conversion for non-agricultural use. Existing studies have suggested that land-use growth is found in the traffic land, residential land, commercial land, and industrial land [31]. Among the four functions, industrial land and residential land are the two main sources of non-agricultural land conversion. In addition, land use has been associated with issues of farmland protection, sustainable development, and rural redevelopment [32–34]. Given the rural/urban divide, the goal of urbanization is to strengthen urban-rural interactions, in which the advancement of the land capacity is critical to achieve transformation.

3. Methods

3.1. Study area

Shenzhen was nominated as the nation's first batches of Special Economic Zones, with more than 300 villages being scattered throughout the city's territory [35]. It is a major sub-provincial city on the east bank of the Pearl River estuary, which is located on the central coast of southern Guangdong province, China (Figure 1). Currently, Shenzhen is comprised of nine districts and one functional district (Dapeng New District). Shenzhen enjoys a vibrant economy from rapid foreign investments and national policies toward its economic development. Favored by the policy of Reform and Opening-up in 1979, the city has grown into a leading global technology hub and one of China's fastest-growing

cities. Situated in the once rural Bao'an County, Shenzhen was well positioned to have witnessed the inflow of foreign investments and industrial transfers. This has attracted floods of migrant workers coming to the city and encouraged the establishment of factories and other infrastructure sites. Consequently, villages' land was expropriated mainly for the use of industrial development. On some occasions, the expropriated land was used to develop local housing projects. The urbanization development in Shenzhen was achieved through institutional transformation and administrative rescaling. To summarize, it experienced two stages. The first stage was implemented in 1992, when 68 rural villages in the core city were revoked and transformed into 100 urban residential committees. Then in 2003, rural urbanization was carried out in two suburban districts. According to official statistics, 27 million indigenous villagers were given urban hukou (a system of household registration), and at the end of 2004, a considerable amount of collective agricultural land was converted to state-owned land. Therefore, Shenzhen became the first city in China that had no rural institutions.



Figure 1. Location of Shenzhen City in China and its administrative districts.

3.2. Research design

This study implements a qualitative research design. It is useful to facilitate an in-depth investigation of the research topic [36]. Shenzhen was chosen as the site for research. First, it experienced rapid urbanization and significant growth in the collective economy over the past four decades. Second, Shenzhen was originally built on rural villages and now constitutes a rural/urban structure. The process of urbanization has been intense, and this makes reasonable case to study. Third, Shenzhen enjoyed considerable autonomy and played a leading role in innovation in various aspects of innovation. Based on these considerations, Shenzhen can be a suitable location for an in-depth case study.

To facilitate a qualitative research design, a case study was conducted. The empirical case is Shixia Village, located in Futian District, Shenzhen. The rationale for choosing Shixia Village as the specific case is as follows. First, Shixia Village is located in the central area of Futian District, which is accommodated with well-established facilities, schools, and shopping malls. Second, urban redevelopment in Shixia Village has been effective in terms of advancing the economy and building

new industries since 2009, when the village started to redevelop. In this sense, Shixia Village could be a representative case of urban redevelopment and this brings rationality for developing the case analysis. Figure 2 presents the overall plan of redevelopment of Shixia Village. Geographically speaking, this area is quite dense and is surrounded by old villages. As the city continues to develop and expand, the necessity of redeveloping this area has become urgent. Based on the official reconstruction plan, the object of redeveloping this area was to improve villagers' living conditions and to enhance public service provision through the implementation of renovation.

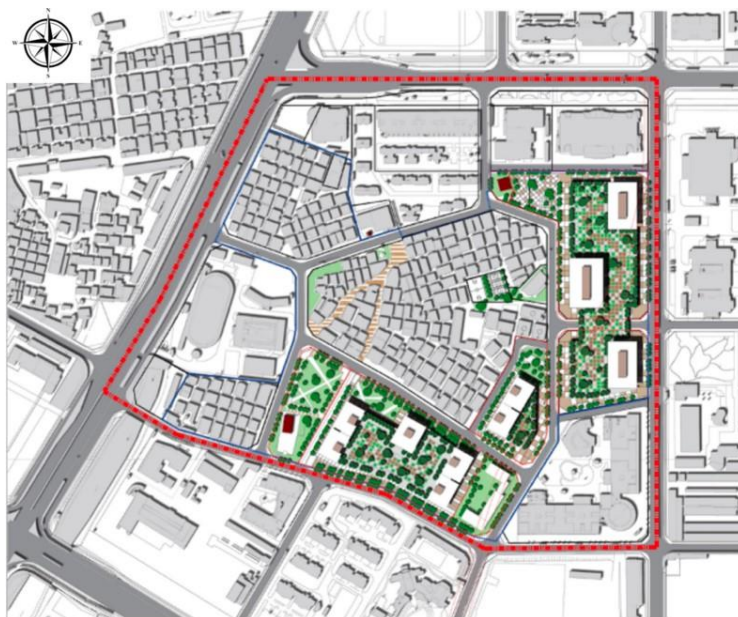


Figure 2. The overall plan of redevelopment of Shixia Village (Source: SURO, 2009).

The data were collected from two main sources: interviews and documents. The fieldwork was conducted in 2016. Interviews were conducted with five government officials, three community-sharing company's leaders, and nine villagers. Each interview ranged between 60 and 90 min in length, depending on the time availability of the interviewees. Questions asked during the interview focused on the process of redevelopment, including the following: what drove the village to redevelop and what were the outcomes? How did the land use change and policy dynamics in urban villages impact urban governance and why? Apart from interviews with officials from Shenzhen Urban Renewal Official (SURO), both official documents and internal publications were utilized to analyze the case. The reasons were twofold. First, it is relatively difficult to obtain all relevant data only through interviews because the urban village is operated as a closed system. Second, interview transcripts and document texts were triangulated for the purpose of ensuring the credibility of the data collected. Documents can facilitate a contextual understanding and help guide the interviews and interpret the interview answers. The documents include the planning books of redevelopment and village chronicles preserved by the village committee. To be specific, these documents illustrate the objective, the framework of reconstruction and the implementation details of redevelopment projects. Documentary data presents an overall picture of urban redevelopment, which is helpful to understand the motive and the logic of urban governance. Furthermore, reports and news coverage about village history were also utilized to supplement the first-hand data.

4. Case analysis: How was Shixia Village transformed?

4.1. Forces of redevelopment

Urban redevelopment in Shenzhen is mainly characterized by institutional, social, and economic forces. The process of redevelopment involves the participation of the local government, landlords and developers [14]. Besides, in such development projects, partnerships between the local government, developers and the collective companies are formed [37]. For local administrators, urban villages are perceived as an urban governance problem because its existence created problems relevant to social stability and community safety. Due to potential threats to urban governance, the local government is driven to take measures to redevelop urban villages. Landlords always want to make more profits through renting apartments, and it is extremely difficult for them to give up the properties because the land they possess can generate considerable income. Prior to the actual redevelopment, the developers have to make sure all relevant landlords support the plan of urban redevelopment and contribute to the implementation of the designed redevelopment projects. Urban redevelopment has created opportunities for developers to make economic profits. For example, urban villages that enjoy convenient transportation conditions or adequate public facilities and services are able to create higher values than those of less developed urban villages. Since the interests held by each actor vary, urban redevelopment has undergone a rather complex process.

4.2. Strategies of redevelopment

Shixia Village is widely reported as a vibrant village since it has accommodated migrants coming from different parts of the country. They are from all walks of life such as taxi drivers, restaurant owners etc. The redevelopment of Shixia Village started in 2009. According to the reconstruction plan launched in 2009, land use is categorized into five main areas: residence, roads and squares, government and community land, green area, and commercial service land (Figure 3). The strategy of redevelopment is partly defined as renovation and comprehensive renovation. In essence, the redevelopment project is led by the government, jointly implemented by stakeholders involving developers, villagers and community shareholding companies. In the process, each stakeholder plays a different role. Specifically, the government is primarily responsible for designing policies, approving overall planning, and coordinating actions between various stakeholders. Villagers and the community shareholding companies are expected to participate in the process and provide suggestions concerning the proposed planning. In accordance with the proposed plan, it is the responsibility of the real estate developer to implement the planning and construct the property.

The implementation of redevelopment projects consists two phases. The first phase focused on the renovation of metro line areas, sports venues, public parking areas and public toilets. The second phase emphasized education-related projects, including building a kindergarten, cultural activities rooms, community service centers and other service facilities. According to statistics provided by the Shixia share-holding company, there were 218 village households containing 601 villagers, with a temporary population of 2.7 million at the time of initiating the redevelopment project. The collective economy mainly came from property rentals, including renting factories, restaurants, and some other properties. For the villagers, their income mainly arose from renting private housing. In terms of land use, residence land accounts for 62.8% and very scarce land was developed for commercial use.

Therefore, the main purpose of redeveloping this area was to improve the overall image of the city, as well as to accelerate the urbanization process of this specific area.

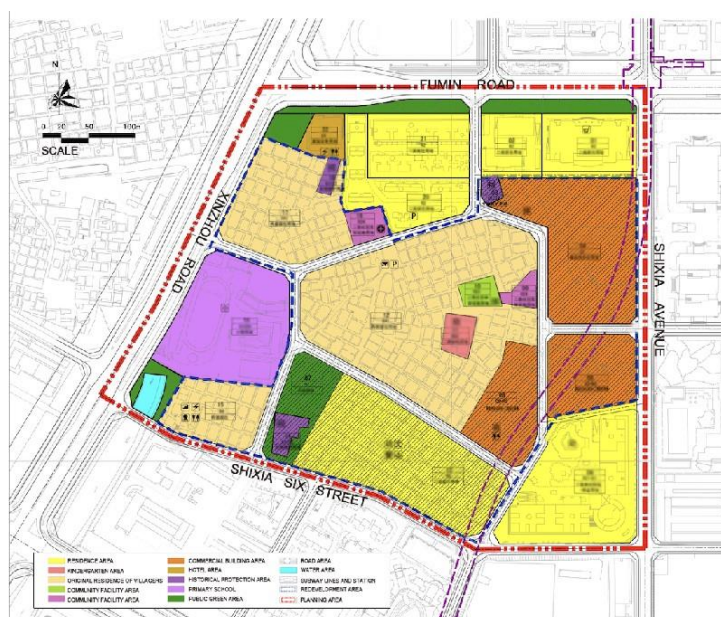


Figure 3. Detailed information of redevelopment zones (Source: SURO, 2009).

In terms of the strategy, the redevelopment project has been divided into three parts: the renovation area, the reserved area and the demolition area (Figure 4). First, the demolition area is planned to be reconstructed, though it is incompatible with the city's overall development. A major problem in this area was reflected in readjusting the industry structure, improving public service delivery and strengthening the quality of construction. Hence, this area is in great need to be included in the comprehensive plan of urban development by improving transportation facilities and removing both private and collective buildings. Second, the comprehensive renovation area refers to those with great difficulty of completely removing from the current location. Considering the tough conditions, the local government decided to renovate based on the existing structure. Environmental protection, community safety and comfortable living conditions are the main concerns. Third, compared with the aforementioned areas, the reserved area is evaluated as the least redeveloped area that enjoys a good quality environment and public facilities. Redevelopment of this type of area is in accordance with the city's overall strategy of reconstruction, which means that unless necessary, this area can be reserved to follow its original plan of development. Practically, the outcomes of redevelopment in Shixia Village have been effective, as manifested in the updated image of the village as well as the improved conditions for urban development. Specifically, the road conditions have been improved, during which four bypasses were built and three bypasses were expanded. In terms of public facilities, one more kindergarten was built that could accommodate 12 classes with well-established surroundings, including culture centers, medical and health facilities. Based on the redevelopment strategy, public facilities and services were treated as a significant function that needed to be strengthened in order to improve the living conditions of the villagers. At the completion of all redevelopment projects, one piece of green land was developed and specific measures were implemented to preserve the cultural heritage of this village.

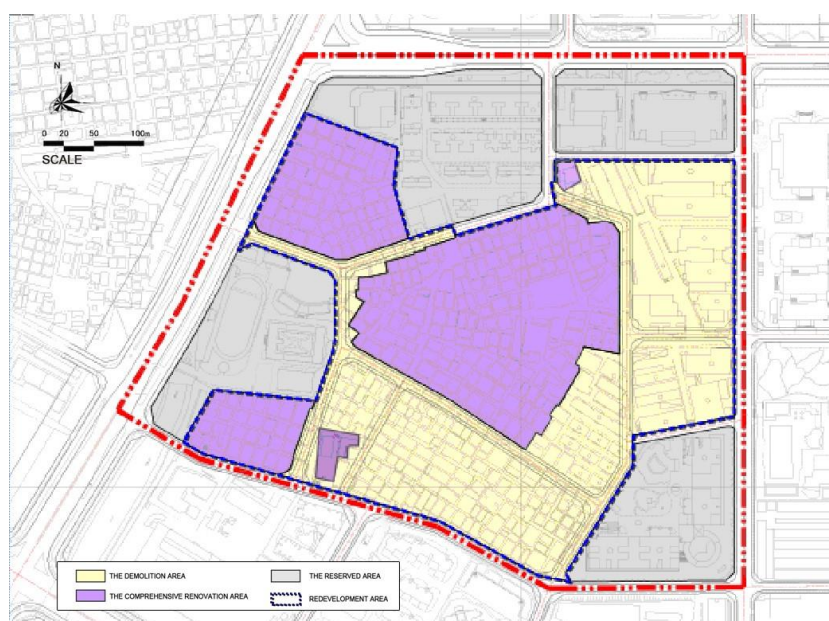


Figure 4. Divided areas of the redevelopment strategy (Source: SURO, 2009).

4.3. Policy dynamics and conditions for urban governance

Policy dynamics is mainly reflected in the complexity of urban villages because the stakeholders involved in the redevelopment vary considerably in terms of their interests, as well as the role. Like many other urban villages in China, redevelopment in Shixia has also been influenced by a series of factors, including political, economic, social, and cultural aspects. In addition to these basic factors, the policy variable is found to be critical throughout the whole process of the city renovation. In the case of Shixia, the favorable location of this village indicates the potential for increasing the prices of properties. In such circumstances, the government sees an urgent need to redevelop the village facing a shortage of land. On one hand, urban villages look “similar” to cities because they have industries, schools, recreation facilities and other public facilities. The purpose is to facilitate residents’ lives and help increase the income of indigenous villagers. On the other hand, located within the urban built-up area, the urban village possesses the features of both urban and rural societies [4]. However, land use in these villages is often unorganized on a larger scale. They are quite unique in the way that they are “isolated” from the city and operate as a closed system. Therefore, this phenomenon generated a very complicated picture of governance within urban villages. The uniqueness of urban villages is related to the dichotomy of the rural-urban land system. Due to the ambiguous policy toward urban village development, the urban village has eventually grown into a self-organized unit. Theoretically, the city government should be responsible for taking care of urban villages by providing quality public services. These urban villages are managed in a different way, in which policies toward sustainable urban development are ineffective. This has led to various problems in urban governance.

Urban governance in China is different from that of western countries. In general, governance refers to a process of decision-making among stakeholders, during which different relationships can be manifested [38]. In the current literature, a governance mode is often perceived as the interplay between the government, market, and society [39]. In urban villages, redevelopment involves a complex process in which the government, developers and villagers compete for its own benefits.

Distinguishing forces of redevelopment is helpful to understand the governance modes in urban villages. Different from a single top-down approach, redevelopment in urban villages has indicated a government-community collaboration mode reflected in various aspects. In a collaboration mechanism, the government acts as a planner and developers oversee initiating redevelopment projects. As indicated by interviewees, decisions are made through several rounds of negotiation, in which a degree of autonomy is achieved. This process is characterized as the core of urban governance. It involves both competition and cooperation. The fieldwork indicated that the stakeholders need to be cooperative; otherwise, it would be impossible to achieve a win-win solution. In the case of Shixia Village, both the government and community forces are demonstrated in the implementation of redevelopment projects. In other words, redevelopment in this urban village has not been a centralized mode, nor is it a bottom-up strategy initiated only by the villagers. Due to the complexity of urban villages in China, the government-society-market mode may not effectively explain the actual process of redevelopment. Besides, the relationships between stakeholders can change if the policy setting in urban villages changes.

5. Findings

Based on the analysis of the case, both government and community forces were needed to redevelop the village. Strategically, urban redevelopment is government-led, with the city and district authorities taking a leading role through joint efforts. In terms of implementation, the approach to renovation and reconstruction considerably varies depending on the characteristics and stakeholders of affected villages. In some cases, the rural committee plays a greater role by forming their own redevelopment company [2]. While in other villages, it turns out to be a totally different story. For example, in the redevelopment process in Guangzhou, the institutional arrangements initiated by the government are considered as critical factors that eventually reshape those affected villages [40]. In the case of Shixia Village, the effective redevelopment has experienced a quite difficult negotiation process among stakeholders, in which the interests of each party needs to be satisfied and the demands of the original villagers are finally solved.

“Work is difficult. We have revised many versions of the urban village redevelopment plan to meet the interests of many parties.” (Interview 1)

A significant driving force of implementing redevelopment projects is the consensus reached among stakeholders, which shapes the basis of cooperation. As indicated by interviewees, each party has its own interests and negotiation among the government, developers and villagers has always been time-consuming.

“It is a lengthy process, each owner has their own ideas, and it is difficult to reach an agreement. Some people signed up early and were worried about losing, so most people are still waiting. We need to communicate constantly.” (Interview 2)

On the one hand, the redevelopment strategy launched by the local government is not to be challenged. In other words, the key issue is to develop a win-win solution to solve existing urban problems and then to promote urban redevelopment in those affected villages. On the other hand, the conflicts between redevelopment and preservation have existed for a long period of time. It requires a balance between economic development and cultural preservation; this has been found as a common problem in the urban development of Chinese villages. Given the fact that Shixia Village is of a rich history, respect for cultural norms and values has always been a virtue established hundreds of years ago. Thus, the redevelopment plan is likely to work.

The dynamics of redevelopment in the village have manifested themselves in a co-management process engaged by stakeholders. Co-management is defined as shared decision making and conflict resolution in close collaboration with local stakeholders [41–43]. The case demonstrates that a co-management mechanism has the potential to facilitate the cooperation of stakeholders in different redevelopment projects. It requires the active participation of different actors. In the case of Shixia Village, the participatory process was strategically planned with the engagement of affected villagers, developers, landlords and the government. As shown in the case, a critical condition for participation is the effective adaptation of the redevelopment process to the circumstances and policy setting of urban villages. This finding further suggests that the redevelopment of urban villages has been a learning process, or “loops of learning by doing” which is the core of co-management [44]. In addition, the co-management mechanism built on participation of stakeholders contributes to a successful redevelopment process. By analyzing the implementation results of redevelopment projects, it has strengthened the argument that the interplay between the government and other stakeholders has been fostered through multi-forces involving both top-down and bottom-up elements. Moreover, the institutional and policy settings of urban villages are fundamental to future urban redevelopment.

To summarize, the land use change in the redevelopment process has gradually reshaped the urban village. Consequently, this has transformed the provision of public services. First, the rural/urban structure complicates urban governance due to the complex property rights arrangement. As a result, illegal buildings and unregulated facilities were created. In order to solve the rural/urban divide, the land use system must be reformed. In this process, the interests of the affected villagers and other stakeholders were redistributed. In fact, this change has generated an increased significance to affected groups and urban development. One important consequence is the enhanced urban governance. Furthermore, the capacity of city government has also been strengthened in the process of accommodating the increased interests of the villagers and in providing good quality public services.

6. Discussion and conclusion

Urban redevelopment has changed the image of urban villages in China. By conducting the case in Shixia Village in Shenzhen, this study found that urban governance has undergone a rather complex process in which land use change and policy dynamics play a significant role. It also indicates that the complexity of urban redevelopment is mainly reflected in the land use change system; this dual system complicates the policy making of urban village development. This study further suggests that the redevelopment process in urban villages involves an integrated approach that combines both government and community forces. It aims to extend current research by arguing the importance of policy dynamics in understanding the evolution of urban villages in China. Additionally, findings generated from this study may contribute to current urban research in terms of recognizing the policy context of redevelopment and its implication on urban governance. In the meantime, most vibrant cities have a complex social, economic, and land-use structure [45]. Given the reality, city governments should be aware of the diversified conditions for urban development, as well as personalized needs of residents. Thus, in future policy making, priorities should be given to decreasing the urban-rural disparity by effectively utilizing the remaining land and improving the quality of public services.

This study has shed light on the interrelationship of land use, policy dynamics and urban governance. By way of a case study, it focuses on the policy variables in understanding the complex process of urban redevelopment in China. This study is among the few that explicitly examines the

relationship between land use and urban governance. Different from studies on urban redevelopment in Western countries, findings from this study suggest that the policy dimension is critical to illustrate the complexity of urban redevelopment in Chinese urban villages. Therefore, regarding further transforming urban villages, the path should recognize their varying characteristics, land use policies and governance structures.

Additionally, this study has provided some policy implications.

First, the positive impact of redeveloping urban villages should be recognized, in which the land use system has been a critical factor. In particular, the land use change strengthened the function of public service land, which played a significant role in reshaping the basis of urban governance. Thus, it created opportunities for local government to continue innovating urban villages in terms of sustaining villagers' lives and enhancing public service provision.

Second, in the process of urban redevelopment, benefits generated from the collective land property should be effectively distributed among residents to sustain urban village development. At the same time, the characteristics and the needs of different social groups should be fully considered in order to achieve sustainable development. Specifically, the transition from villagers to residents is a complex governance issue that requires more systematic studies in the future.

Third, local government is expected to focus more on the public side of urban redevelopment, such as building more public facilities and providing more good quality services to improve urban governance. Existing research has indicated that the process of redevelopment is often accompanied by the restructuring of tenants and a changed status [46]. Based on this consideration, the government is responsible for facilitating villagers in the process of integrating themselves into the community. Moreover, demographic features and the varying conditions of residents should be taken into account to improve future policy-making.

Use of AI tools declaration

The authors declare they have not used Artificial Intelligence (AI) tools in the creation of this article.

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Conflict of interest

The authors declare no conflict of interest.

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