

Zhou, Ziqi; Yau, Yung

Article

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Journal of Urban Management

Provided in Cooperation with:

Chinese Association of Urban Management (CAUM), Taipei

Suggested Citation: Zhou, Ziqi; Yau, Yung (2023) : Revisiting institutional credibility of informal rental housing in Shenzhen: For dwelling function or exclusion function?, Journal of Urban Management, ISSN 2226-5856, Elsevier, Amsterdam, Vol. 12, Iss. 2, pp. 112-128, <https://doi.org/10.1016/j.jum.2022.12.002>

This Version is available at:

<https://hdl.handle.net/10419/271496>

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Research Article

Revisiting institutional credibility of informal rental housing in Shenzhen: For dwelling function or exclusion function?

Ziqi Zhou^a, Yung Yau^{b,*}^a Department of Public Policy, City University of Hong Kong, 999077, Hong Kong, China^b School of Graduate Studies & Department of Sociology and Social Policy, Lingnan University, 999077, Hong Kong, China

ARTICLE INFO

Keywords:

Informal rental housing
Credibility thesis
Institutional function
Dysfunction
Functional substitute
Institutional change

ABSTRACT

The credibility thesis premises that an institution's endogenous credibility and function, rather than its form, ensures its persistence. Informal rental housing (IRH), an informal housing institution in China, was suggested to serve as a dwelling for low-income residents in previous research on institutional credibility. Combining the institutional functionalism in credibility thesis and the relational and constructivist perspective in the strategic-relational approach (SRA), this research on two distinct SPRH cases in Shenzhen aims to re-examine the credibility thesis, moving the emphasis away from institutional functions toward the interaction between function and dysfunction, and their substitutability in the relation reconstruction dynamics. It reveals that the informal housing institution's credibility rationale has shifted in Shenzhen. Instead of serving a dwelling function, IRH is becoming an investment tool for profit-making and a part of public service for government targets, contributing to the credibility of informal housing and exacerbating the exclusion of the disadvantaged groups from urban areas. IRH's institutional credibility is contingent upon not just the endogenous institutional function, but also on the interplay of the function and dysfunction embedded in its institutional environment.

1. Introduction

Existing studies have shown housing inequality in the context of China's housing reform (Huang & Jiang, 2009; Li & Fan, 2020; Wu, 2019). The real estate reform in China has brought about economic growth and housing inequality (Wu, 2019). With the growth of economic function and the weakening of social function in formal housing institution, the emergence and growth of informal housing market has followed. In the areas with high house prices, there is such a kind of housing whose facilities and environment are dilapidated, but it plays the important social function, that is, providing affordable housing for low-income people. Examples of this type of housing include slums in India (Zhang, 2018), sub-divided units (SDUs) in Hong Kong (Huang, 2017; Yau & Lau, 2018), and informal rental housing (IRH) and small property rights housing (SPRH) in mainland China (Sun & Ho, 2018). Informal housing in urban villages is a housing institution with "incomplete" property rights. Due to the urban-rural dual structure of China's land, the urban land is state-owned while the rural land is owned by the rural collectives whose property rights do not include the legal transfer right. Therefore, housing developed upon China's rural collective land cannot be officially registered, certified, and transferred without the

Abbreviations: IRH, Informal rental housing; RFC, Relation-function-credibility; SPRH, Small property rights housing; SRA, Strategic-relational approach.

* Corresponding author.

E-mail addresses: ziqizhou4-c@my.cityu.edu.hk (Z. Zhou), yungyau@ln.edu.hk (Y. Yau).

<https://doi.org/10.1016/j.jum.2022.12.002>

Received 23 June 2022; Received in revised form 7 November 2022; Accepted 16 December 2022

Available online 30 December 2022

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permission of the urban government. On the land originally owned by the farmers in rural and urban suburbs in mainland China, houses built for profits or incomes by transferring usufruct right are called informal housing, including IRH and SPRH. Although the government has announced the ban of informal housing built on rural land many times, this type of informal housing still persists in cities.

The credibility thesis provides an explanatory framework for the persistence of informal institutions. It argues that informal institution persists for its endogenous functions in a specific period and region, which means it has credibility for actors (Ho, 2016). The institution with high credibility should not be interfered. Otherwise, the intervention will be ineffective and may even cause certain negative consequences. The thesis discusses the aggregate functional performance of an informal institution. It proposes that forms subordinate functions, which explains, to a certain extent, the reason why China's "public property rights institutions" (i.e. nationally-owned land and collectively-owned land) have fueled China's economic growth for decades. The credibility thesis also makes up for the gap that property rights theory emphasizes the decisive effect of institutional form. However, the analysis of institutional functions using the credibility thesis only interprets the static functions in a specific spatio-temporal location. In the framework for explaining institutional changes, the credibility thesis is more developed in the discourse system of power differences and actors' interaction, but it lacks the integration of interactions and games from a meso-level functional perspective.

Therefore, this study combines Merton's (1968) functional analysis paradigm with the credibility thesis which provides a mid-level functional analysis perspective that can participate in the interpretation of social dynamics. Moreover, we combine the relation perspective and constructivism perspective in Jessop's (2001) strategic-relational approach to propose a relationship function capability analysis framework. This study believes that the meaning of the function is constructed in a complex environment, rather than the inherent attributes of the institution. Even if the institutional setting itself remains unchanged, if the environment in which the institution is located changes, the meaning of its function will also change. According to this analytical framework, the research aims to explore how the actors in the informal housing institution and the actors in the external environment can achieve institutional changes through the construction of functions and relations. Taking two IRH communities in Shenzhen as cases, we carried out ethnographic research and conducted semi-structured interviews with different actors. It is found that, under the influence of urban entrepreneurialism, the competition between cities and regions makes Shenzhen government try to complete the industrial land upgrading through gentrification strategy. Different from the previous coercive intervention and the robust opposition to informality, in the new comprehensive renovation project, the local government provide functional substitute to the village collective, and the land distribution conflict between government and the village farmers' collective is transformed into a cooperative relationship with complementary goals. The cooperation blurs the boundary between the formality and informality of the rural housing institution through government endorsement. The informal housing institution in Shenzhen can be transformed to fit the actors' objectives, and the formation logic of its credibility also changes. The original IRH persists and forms its credibility for its dwelling function for middle- and low-incomers, while the intervened IRH changed and rebuilds its credibility with the remained manifest functions, added functions, and latent dysfunctions in the interaction of actors.

The structure of the article is as follows. In the second section, the credibility thesis is reviewed and combined with Merton's (1968) functional analysis paradigm and strategic-relational approach (SRA) to form the conceptual framework of this study. Then, the methodology and the profile of housing in Shenzhen are described. Two IRH cases in Shenzhen are analyzed and the relational and functional composition of intuitional credibility in the two cases are explained in detail afterwards. Drawing on the findings of the empirical research, this article discusses the conceptual framework of dynamic disequilibrium with reference to the interaction of function and dysfunction in relation reconstruction. The last section summarizes and reflects on this research.

2. Literature review

2.1. Informal housing in China: Formation and development in specific institutional environment

Under the influence of neoliberalism and state developmentalism, China has carried out the housing marketization reform, and urban housing has gone through three stages of property mechanism, industrialization and financialization (Wu, 2019). The wealth effect and local economic growth brought about by these changes have stimulated the land expropriation and land finance carried out by local governments to promote urbanization (Ding, 2007). At the same time, in the context of China's urban-rural dual land system, rural land is owned by collectives, but the rights are limited to homestead, agricultural production and the development of collective enterprises. The transfer right is controlled by the urban government. Using the land for profitable real estate development is illegal and prohibited by the state. The state not only monopolizes the provision of urban land, but also holds the right to expropriate rural land without paying high compensation to the affected farmers (Cai, 2003). Incomplete rural land property rights are difficult to transfer, limiting the effective allocation of agricultural resources (Zhu et al., 2006). The state has issued policies to restrict rural land planning and housing construction. Institutional discriminations against rural areas in terms of land use rights, income redistribution, decision-making procedures and social welfare systems related to household registration have provided an internal drive for rural collectives to go beyond "formal" management procedures to undertake "informal" housing construction (Zhao, 2017). These informal housing developments are in an adversarial relationship with the formal housing in the official discourse. The informality often represents a dilapidated living environment, disorderly trading rules, and contradictory economic relations. Behind the constructed discourse system of the symbolic "informal" institutional discussion is the "land struggle" between the state-funded urbanization development and the rural collective's opposition to land grabbing (He & Xue, 2014; Levien & Paret, 2012; Walker, 2006; Zhang & He, 2020).

Meanwhile, with the variation of institutional environment and housing market, the informal housing has also undergone changes in different stages. Since the economic reform in 1978, Chinese cities have expanded rapidly. The imbalance between housing supply and

demand has become prominent. Slum-style urban villages have been built and expanded in violation of the prevailing regulations. They provide low-rent living space for low-incomers and migrants, forming an informal rental market. The space features multi-family living, mixed personnel, and disorderly buildings. During this period, the transformation measures of urban villages was top-down demolition and reconstruction in the form of urban real estate development. The collective land was turned into state-owned land, which materialized the land value. However, the top-down transformation projects are more likely to take a long time than those implemented through bottom-up ones (Yuan et al., 2021). They also failed to address the fundamental needs of society and could not curb the proliferative expansion of IRH in urban villages. (Liu et al., 2010; Tian, 2008; Wu, 2016). Informal housing has gradually developed into an affordable housing trading market with a mature institution (Liu et al., 2018; Zhang & He, 2020; Zhao, 2016; Zhao & Zhang, 2018). These new informal housing communities usually cover a large area, consist of high-quality buildings and living environments, and have robust pricing mechanisms (He et al., 2019; Lai et al., 2017; Zhang & Zhao, 2018). Although there is no property certificate recognized by the state and it is considered as “informal” small property rights house, the informal housing works for its actors, because in the transaction process the buyer standardized economic relations by signing a contract with the village committee (Ho, 2018b). They also establish a reputation system and negotiation rules on social networks to resolve disputes arising from ownership (Zhang & He, 2020). The informal housing institution formed by informal rental housing and small property rights housing on the homestead reflects the important function of the fuzzy and symbolic informal land development right in the regime of Keynesianism-neoliberalism with Chinese characteristics, which provides empirical evidence for reflection on the property rights theory of institutional economics.

Classical property rights theorists believe that formal and clear property rights are the basis for improvement in land use efficiency (Alchian & Demsetz, 1973; Coase, 1960). Along this line of thought, some scholars and government policies emphasize that the marketization level of rural land can be improved through the formalization of rural land ownership (de Soto, 2000; Liu & Han, 2006; Zhang, 2002; Zhu, 2004). However, empirical studies in many countries show that the formalization has not played a positive role in promoting land transfer and economic performance (Monkkonen, 2012; Ward et al., 2011). Other scholars emphasize that institutions are endogenous, and the development plan of informal housing cannot be separated from the discussion of its specific diachronic institutional environment (Lai, 2018). The government should adopt more flexible treatment methods according to specific political, economic, social and cultural backgrounds. (Lai et al., 2017; North & Thomas, 1973; Payne, 2004; Wang, Sun, & Li, 2014; Zhang et al., 2016; Zhao, 2017; Zhao & Zhang, 2018). Under the political background of China's decentralization and the rise of anti-land grabbing radicalism, as well as the economic background of the intensification of the supply and demand of formal housing, the existing research can be divided into the two-aspect exploration of the dynamic process and persistence of the informal housing institution: one focuses on the interpretation of institutional changes, conflict struggle and relational construction in the process of formation (Deng & Deng, 2021; Zhang & He, 2020); the other is to focus on explaining the functions and social needs reflected by the persistence and resilience results of the institution (Ho, 2016; Sun & Ho, 2018). Although the credibility thesis and the SRA respectively provide analytical frameworks with different emphases, they are also skeptical of rationalism and emphasize the endogenous nature of the institution. In essence, they are not mutually independent and mutually exclusive, but have different degrees of intersection and overlap. Therefore, this article attempts to establish a conceptual framework by combining the commonalities of the two to help us understand coherently institutional persistence and change.

2.2. Relation-function-credibility (RFC) analytical framework: credibility thesis and strategic-relational approach

The property rights theory in institutional economics emphasizes that the form of property right needs to be clear, private, formal and complete for alleviating the externality of the market, reducing transaction costs, and forming an incentive mechanism to promote the efficiency of economy (Coase, 1937). China's public property rights institution of land may be considered “suboptimal”, compared with the private, formal, and secure property rights by neo-liberal economists (Palomar, 2002). On the other hand, the credibility thesis put forward by Ho (2014) explains the economic prosperity brought by China's property rights institutions from the perspective of institutional function. It premises that institutional function rather than institutional form is the internal factor that determines the performance of the institution (Ho, 2014).

Moreover, the credibility thesis also explains that informal housing can persist because of its overall institutional function of social welfare under the current socio-economic background (Ho, 2014). Specifically, with the increasingly economic function of formal housing, the social function of formal housing, namely, the function of providing necessary living space, has become difficult to achieve due to the effects of both the original socialist institutional arrangements and market mechanisms in Chinese cities, especially for low-income people (Li & Fan, 2020). Therefore, IRH in urban villages plays a certain regulatory role in the process of urbanization (Ho, 2014). It has been argued in previous studies on the credibility of China's informal housing institution that IRH is economically, socially and psychologically credible for the low- and middle-income groups within a certain geographical and time range, so it should not be interfered (Sun & Ho, 2018).

The credibility thesis opposes Parsons (1951) and Merton's (1951) structural functionalism, and believes that their static interpretation of function and the proposed equilibrium state overemphasize consensus and stability, while ignoring changes, conflicts and crises in society (Ho, 2018a). Ho (2018a) continued Lamarck's (1809) view of functional evolution, believing that change is a long-term state for institutions to adapt to the environment, instead of stability, and that history is a necessary condition for understanding institutional functions. It postulates that the institutional credibility is completely endogenous, and institution can persist because of its institutional functions. In terms of institutional change, the credibility thesis proposes the concept of dynamic disequilibrium for describing the states of persistence and change. The institutional persistence is also in dynamic disequilibrium rather than settling around equilibrium, but the speed of change is imperceptibly slow (Ho, 2018b). It also posits that changes and conflicts are the driving forces of actors' interactions (Ho, 2018b). Therefore, in the credibility thesis, the institutional function is defined as “the role of a set of

rules as it has endogenously evolved in continuous adaption to the environment” (Ho, 2018a, p. 645).

Four cornerstones underpin the conceptualization of “institutional function”. First, a function is inherited to a “set of rules”. Second, function is endogenous so it is unintentional. It is mainly because the institution is also unintentional. Third, function means continuous change because the institution is constantly adjusting to its environment. Forth, the function of an institution is not based on the stability or balance of power, but on the imbalance of constant bargaining, conflict and division. Therefore, the credibility thesis does not premise that function is a fact, but an interpretation of the influence of “a set of endogenous social rules” on actors (Ho, 2018a, p. 645).

In the explanation of institutional formation, change, persistence, Ho (2018a) maintains that as long as institutions perform a function, they will appear stable. Although they will change constantly, on the contrary, when they cannot perform this function, they may suddenly change, shrink or become extinct. Previous studies have examined the institutional functions under specific time and space nodes and used them to explain their persistence (Ho, 2018b; Sun & Ho, 2018). When discussing the dynamic process of the institution, previous work applied the historical institutionalism to understand actors' interaction and ignore the functional discourse (Chen, 2022; Ho, 2018b; Wang & Liu, 2022), which follows a similar spirit to Jessop's (2001) SRA, emphasizing the diachronic and social embeddedness of institutions, as well as the power differences and interactions between actors.

The critical realism, developed by Jessop, Brenner, & Jones (2008) based on the Marxist view of capital as a social relation, regards state power as a social relation, and solves the binary opposition between economic reductionism and class reductionism in Marxist state theory. He believes that the state form is the product of the “accidental” conjunction of social relations, and the realization of this form involves the process of diversified capital strategy selection to realize the inherent function of capital accumulation. From the perspective of relation, SRA focuses on the interaction between structure and actors' initiative in combination with the structure-agency theory of Giddens (1986) and other scholars. This method emphasizes that the strategic-relational importance in a specific spatio-temporal location should be considered when analyzing the conjunction. The state structure is taken as having strategic selectivity in terms of form, content and operation, while the actors' action is also structurally restricted (Jessop and Morgan, 2022). The attributes, capital and computing power of agents will restrict their actions to form a power relationship (Jessop, 2001). This theoretical framework helps to interpret the strategies of individuals and collective agents, organizations and institutions involved in controversial politics, as well as multi-dimensional social spatial relations (Jessop, Brenner, & Jones, 2008).

There is no doubt that it provides the necessary relational and constructivist perspective to strengthen the concrete and theoretical understanding of the interaction in urban governance, the behavior of actors, and the changes in the political and multi-scale interest structure, such as urban water resource management (Ioris, 2012), Sydney's hegemonic project of “competing cities” (McGuirk, 2004), and the UK's urban renewal project (Pemberton, 2013). In the study of China's informal property rights institution, this relational and constructivist perspective also provides important explanatory power. Combining the endogenous nature of the institution and the relational contract theory, Zhang and He (2020) explain how farmers and buyers can ensure the use and transfer of property through independent relation construction without legal support. Zhou (2005) puts forward the theory of relational property rights, which regards property rights as a social relation rather than a power bundle with exclusiveness. It emphasizes the interaction with others in property right institutional arrangements. From the perspective of relational property rights, Zhang et al. (2021) discusses the right to rural land development under urbanization by analyzing the social relation formed by the diversified property rights of informal housing on rural land.

In this article, we recognize the constructive meaning of institutional functions and the importance of strategical relation construction in functional change. Based on the definition of institutional functions by the credibility thesis, we also believe that Merton's functional classification tools is still meaningful for understanding the issue of institutional functions and the construction of the relation between different interest holders. We redefine the conceptual tool and provide a micro-meso-macro perspective connecting actors, institution and environment. Its manifest and latent classification can integrate the discussion of cultural construction strategies within functional analysis.

Merton (1968) emphasizes paying attention to the social facts at the meso level, and refines the conceptualization of “function” by differentiating it into “function”, “dysfunction”, “manifest function”, and “latent function”. Based on the definition of “institutional function” in the credibility thesis, the four types of functions are defined as follows (Merton, 1968):

- Function: the role of a set of strategically chosen rules by actors, as it has endogenously evolved in continuous adaption to the environment;
- Dysfunction: the negative feedback or hindrance of a set of strategically chosen rules by actors, as it has endogenously evolved in continuous adaption to the environment;
- Manifest function: the function publicly displayed and emphasize. The process of manifestation may involve conscious discourse construction and propaganda; and
- Latent function: the function hidden under the institution. It is not easy to detect and its latency can be intentionally or unintentionally formed.

For example, the empirical research on the function of social conflicts among children finds that its manifest function is to build a small-group society and its structure, while its latent function is to develop children's sense of social structure and reproduce authority, friendship, and other interactional patterns (Maynard, 1985). The manifest function of the church and the temple of immigrant religious organization is cultural preservation, and its latent function is promoting socioeconomic mobility (Bankston & Zhou, 2000).

In a society, it is difficult to objectively evaluate the net value between functions and dysfunctions so as to determine whether a system ultimately has positive net value and should be retained. The credibility thesis emphasizes that institutional credibility represents the net value in the overall sense, that is, the aggregate supporting perception of the actors (Ho, 2016). However, much existing

credibility-based research on informal institution only uses functions for internal actors to explain its continuous existence and applies historical institutionalism to interpret institutional changes in a long-term perspective (Chen, 2022; Ho, 2018a; Liu et al., 2018; Sun & Ho, 2018, 2020; Wang & Liu, 2022; Zheng & Ho, 2020). However, differing from the path dependence in historical institutionalism, credibility thesis believes that it is the institutional function embedded in the complex environment that causes it to be difficult to intervene and persist (Ho, 2018a). This turn seems to remind us that the factors determining the variability or invariability of the institution are not the strength of external forces and the inertia from self-reinforcement mechanism, but whether the actors can pursue their interests and whether they can meet the needs under specific spatio-temporal context. Therefore, understanding institutional development necessitates an examination of both static and dynamic functional connections across institutions. We must first understand the functions of an institution in order to reform it without creating severe social or economic upheaval. Incremental change with minimal negative consequences is judged feasible if a new institution can consistently execute the previous institution's functions. Understanding the dynamic disequilibrium processes between institutions in transition requires due consideration of the substitutability of an institution's activities (Zhou & Yau, 2021).

As Varley (1987) suggests, property rights are socially constructed, not completely dichotomous, and their functions should be understood according to specific circumstances. Combining the institutional function perspective of credibility thesis and the relation perspective of SRA, this article focuses on the reconstruction of functions and relations in the process of the change of the IRH institution in China's urban villages, and tries to answer the question how the informal housing institution can achieve the change in form into public housing through the construction of relations and functions. Based on Chen's (2022) analytical framework on institutional change, we develop our credibility thesis framework by incorporating the analysis on the reconstruction of institutional functions and relations. In this regard, an analytical framework of relation-function-credibility (RFC), which is graphically shown in Fig. 1, is proposed to further explain institutional changes. The RFC framework is useful in probing diverse attempts to intervene in the informal housing institution.

3. Methodology and description of housing in Shenzhen

With reference to the conceptual framework of the research, we conducted ethnographic field investigation on the selected cases, namely, Shangcun and Shuiwei. Specifically, we would like to answer the two research questions – “how do relation and function shape credibility” and “how do actors reconstruct the relation with functional interaction to reshape credibility”. In this regard, it is necessary to select two different cases for comparison. One case is a typical unmodified urban village with IRH, which helps to explore the reason for the persistence of IRH, or the logic of its credibility formation. Another case needs to be the transformed IRH. Through the comparison of the two cases, we can explore the way in which its credibility can be reshaped in the transformation process. The first case was randomly selected from more than 1000 urban villages in Shenzhen, as a typical IRH community sample. The second case needs to be chosen from the transformed IRH. IRH transformation in Shuiwei is a famous pilot project. Among the urban villages transformed in the recent ten years, this transformation project took noticeably shorter time, experienced less conflict, and had higher efficiency. Therefore, it is selected as a sample case to study the remodelling process of credibility.

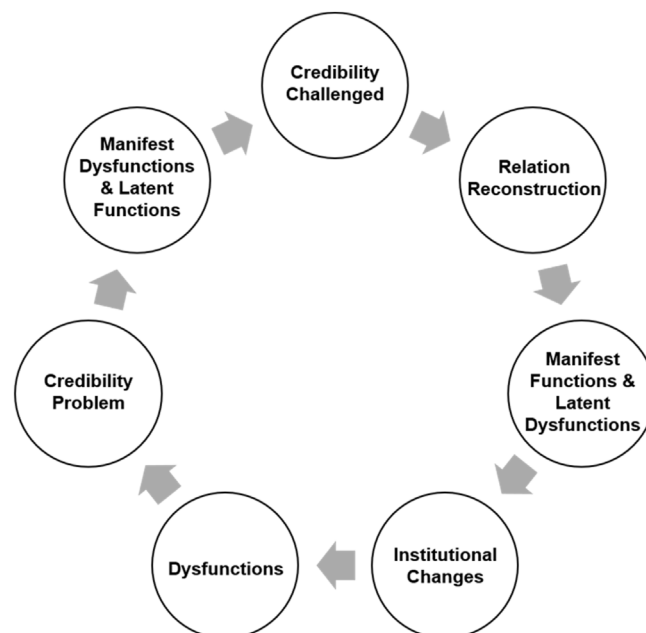


Fig. 1. The RFC analytical framework (created by the first author).

Since the aim of this study is to analyze the formation and remodelling mechanism of credibility from a functional and relational perspective, qualitative research methods are used. Compared with their quantitative counterparts, qualitative research methods enable collection of richer, more detailed, and comprehensive information for exploring the internal logic of the process. Meanwhile, according to Ho's (2016) operationalisation, "measurement" of institutional credibility involves actors' perceptions on institution, conflicts, and institutional change. Therefore, we used in-depth interviews rather than focus group. It can reduce the social pressure from group consensus, so as to explore the respondents' inner thoughts and views on the informal institution, especially the conflicts.

Finally, we conducted in-depth interviews with 26 respondents on two IRH cases: eight tenants and two owners at Shangcun and eleven tenants, three village committee members, one enterprise staff and one government official at Shuiwei. To conduct the interviews, we first contacted the village committees. With their help, we met the randomly sampled tenants, snowball sampled IRH owners, and the relevant government official and enterprise staff. To ensure the inclusiveness of the research, we selected the snowball sampled respondents considering their genders and ages. The profiles of the interviewees are presented in Table 1. For the protection of respondents' privacy, the ages of two respondents were shown as age ranges only. Interview questions were specifically designed for different groups. Respondents were asked questions related to three topics, namely the credibility of IRH and renovated IRH, the functions and dysfunctions of IRH, and the interactions between actors. For example, the tenants and owners of IRH were asked some questions like "how do you think about the ownership and land lease of the IRH", "what were the main objectives to live in or rent out the IRH", "what was the process of renting the IRH", "what role does the IRH play for you" and "what problems and conflicts have you experienced or have happened in this IRH community". Moreover, the government official and enterprise staff were asked "how can the credibility of the renovated institution be ensured", "what were the main objectives to implement the renovation project", "how does the renovated IRH function for your objectives", "what were the policies for guiding the renovation of IRH", "what is the implementation process of the renovation project", "what is the process of negotiation between actors in the comprehensive renovation project", "what are the problems the renovation project experienced in the implementation stage and in recent days".

In the process of data collection, we had informed consent from all participants. Their privacy was protected, and the confidentiality of the research data was ensured. In addition, we also conducted a physical inspection on the surrounding residential and commercial environment, providing triangulation for the information described by the respondents. Various second-hand materials were also collected from a wide array of sources including news reports, government documents on urban village planning, and relevant research articles.

Shenzhen is a first-tier city in southern China. According to the data of the seventh census (Shenzhen Municipal Bureau of Statistics, 2020), Shenzhen's population has increased from 10,424,000 in 2010 to about 17,560,000 in 2020, becoming the city with the largest population increase in China in the past decade. At the same time, the housing stock structure in Shenzhen has been unbalanced, and commercial housing in the city has long been in short supply. In 2014, there were 11.9 million permanent residents in Shenzhen and there was a total of 10.41 million housing units in the city. Within the existing housing stock, 1.8 million were commercial houses (17%), 0.4 million were social houses (4%), 5 million were small property rights houses in urban villages (48%), 0.55 million were self-built houses by working units (5%), 1.8 million were supporting dormitories in the industrial zones (18%) and 0.86 million were other houses (8%) (Huang, 2018).

Despite its informality, informal housing accommodated nearly 67% of Shenzhen's population in 2016 (Shi et al., 2018). It has played an important role in settlement of the middle- and low-income and floating population in Shenzhen. Shangcun is such a typical urban village in Shenzhen, where the IRH owners provide cheap rental housing for migrant workers and earn considerable income. Shuiwei used to be an urban village with similar operation pattern, but a part of it has been changed into a public housing under the regulation of government. The two cases have similarities in terms of their forms of housing ownership, land leases, and affordable prices; they are different in actors, institutional arrangement, and some of the functions and dysfunctions. Therefore, these two cases were chosen for investigating the change process of institution, institutional functions, relation construction between actors and the formation of credibility.

Table 1
Characteristics of the respondents of in-depth interviews.

Case	Role	Number	Characteristic Distribution
Shangcun	Owners	2	Male: 1 (50%); Female: 1 (50%) Age: 38–44 years old
	Tenants	8	Male: 3 (37.5%); Female: 5 (62.5%) Age: 22–46 years old
Shuiwei	Committee members	3	Male: 2 (66.6%); Female: 1 (33.3%) Age: 35–50 years old
	Enterprise staff	1	Male: 1 (100%) Age: >40 years old
	Government official	1	Male: 1 (100%) Age: >40 years old
	Tenants	11	Male: 5 (45.5%); Female: 6 (54.5%) Age: 26–33 years old

4. Comparative case study

4.1. Shangcun: temporary dwelling function through informal housing market

Shangcun is located in Guangming District which is a newly developed area approved by the State Council in 2018. Far from the Shenzhen's central business district, Shangcun is 1 km away from Songbai highway, covering an area of 7.93 km² which includes a housing area of about 2.1 million m². The total population is about 68,000, and there are more than 1500 registered rural residents. 301 factories and enterprises are sited in the village. The function of IRH in Shangcun is to provide affordable housing for the staff of factories in the surrounding. According to the information provided by Shangcun Village Committee, the rent of IRH in the community is relatively cheaper than those in other areas in Shenzhen, with an average of about 29 CNY/month/m². The rental level of a single room ranges from 180 CNY/month to 1500 CNY/month. This is a typical old urban village in Shenzhen that has not been transformed. For its low land cost, enterprises are attracted to set up factories there. At the same time, migrant workers employed in the factories nearby spontaneously live in IRH in the village for the low rents.

As the number of middle- and low-incomers increases, the supply of affordable settlement fails to meet the demand. Given that there is huge economic value embedded in urban villages in Shenzhen, the phenomenon of “housing planting” exists in Shangcun. “Housing planting” reflects the fact that, in the villages near factories and enterprises, rural residents tend to build more and taller settlement blocks for renting out to earn more profits. Therefore, the buildings in the village are relatively tall and crowdedly packed together. Most of these buildings have elevators. The newly built Subway Line No. 6 enhances the accessibility of the village, and thus pushes up the house prices there. Hence, in recent years, local villagers have been rushing to build IRH. The buildings get even closer than before, and two buildings are often only about 1 m apart, as shown in Fig. 2. Narrow public roads and overcrowded buildings are the typical spatial characteristics of urban villages in Shenzhen.

After the in-depth interviews with the tenants and landlords of IRH near an industrial zone in Shangcun, we learned although there is no state-approved property certificate, the tenants and landlords, as users and owners of IRH, transact through an informal real estate market. In the informal real estate market, the contractual relation between tenants and landlords is assumed by a principal contract accorded by both parties and a stable informal relation with a third party. The housing ownership and economic relation between the



Fig. 2. Spatial characteristics of Shangcun (photos taken by the first author).

owners and the village committee are clarified in the form of internally recognized documents. Under this relation structure, the credibility of the informal housing institution is formed in the interaction between functions and dysfunctions for different actors.

Specifically, for tenants, in the context of urban-center developmentalism, working in the first-tier cities, like Shenzhen, is a strategy to rapidly achieve capital accumulation. However, the nearby commercial housing is unaffordable. According to the interviewees and the data from rental platform, the rent of commercial housing is about 1.6 times of that of IRH. Low rent and short commuting distance are major factors in choosing settlement. Moreover, the surrounding public facilities can also meet the basic needs of daily life, which also play an important role, when the respondents choose residence. These findings from interviews are similar to the factors considered by low-income tenants in Hong Kong when choosing SDU to rent, such as distance to MTR stations, accessibility to community facilities and park (Huang, 2017). The old decoration and untidy house design have little impact on their choice of settlement, because IRH are just a temporary place to sleep for the middle- and low-income tenants.

An Interviewee in IRH, who lives in a 10 m² single room with a monthly lease of 300 CNY, said:

“I work in the factory most of the day. I’m tired when I come back and only sleep for a few hours in the room, so how the room environment is actually does not have much impact, because it is just a place to sleep.” (Interviewee 6, Tenant of Shangcun)

It can be seen that although IRH provides a place for low-income tenants, this residence is temporary, and actors cannot get a long-term settlement. Lack of sense of belonging in IRH is one of its dysfunctions. For the tenants of IRH in Shangcun, the important factor that may make them no longer choose IRH is the “unsafe” conditions of the informal housing. Besides psychological unsafety, the unsafe conditions include dangerous living conditions and unprotected rights and interests. Living conditions mainly include fire hazard, noise, crime risk, and other issues about public security. The rights and interests that cannot be safeguarded include unreasonably rising rents and additional fees charged by landlords. However, respondents said that these negative effects have not yet occurred on themselves, which is still uncertain or latent. The informal relational network of the tenants who successfully signed the rental contracts through the introduction of acquaintances also provides them with flexibility for negotiation when their rights and interests are infringed. This kind of informal relational network often comes from stable and lasting social relations, such as being colleagues and fellow villagers, as well as the feedback mechanism provided by the network platform like Douban. Therefore, for tenants, the risk of equity damage is controllable. Risk perception is closely related to hazard events and the property value (Huang et al., 2020). Since the risk perception of IRH tenants is at low level, with the manifestly low-rent dwelling place and short commuting distance, IRH is the strategical choice for them to keep the job opportunities in urban areas. Because of the affordability, renting IRH is a temporarily rational method to save money for seeking a long-term settlement in spite of its informality.

For the landlords (i.e. the investment owners) of IRH, although IRH is informal and not protected by the law and formal regulation, but through the registration of internally recognized houses in the village collective, it is enough to effectively clarify the economic relationship. Thus, the landlords believe that the property right belongs to themselves and there is no contradiction in economic relations. IRH is their own residence on the one hand. On the other hand, the income derived from the IRH rental is considerable. Thus, even though it is not protected by law, the return makes it wise to develop such economically profitable opportunity in the background of contradiction between housing supply and demand under land finance. Meanwhile, due to its low price, it has been in short supply in the rental market, and the dilapidated living conditions with potential safety hazards of IRH have been continued. In order to maintain its low price, the landlord is not motivated to spend the cost to improve the living conditions of the rental house. The outdated physical conditions also increase the possibility of the government's approval of urban renewal projects in this area, and the substantial demolition compensation in urban renewal is a crucial way for villagers and IRH owners to get rich quickly. The only dysfunction of IRH for the owners is its extra-legality, which may lead to the conflict with urban government. As the identification of the extra-legal activity takes high cost, IRH owners can usually get substantial compensation for reducing conflicts. For the IRH owners, the informal housing institution works for its economic value for the owners.

The credibility thesis emphasizes the function for its internal actors in a specific time and space when analyzing the institutional credibility. Previous studies that analyze the functions of IRH tend to focus on its functions for buyers, and argue against state intervention (Sun & Ho, 2018). However, the strategic-relational approach provides a perspective of a multi-scale interest structure. Inclusion of the perception of informal housing institution from external groups in the analytic framework is helpful to understand the interaction between the informal housing institution and the institutional environment.

Under the influence of state developmentalism and urban entrepreneurialism, in order to realize industrial transformation and upgrading, Shenzhen government vigorously carried out talent introduction plan in 2010 and actively solved the problem of industrial land shortage through land acquisition and transfer. In 2015, after the introduction of the Measures for the Residence of Talents (*Rencai anju* plan), the government carried out talent housing construction to solve the housing problem of the population with higher education qualifications (i.e. those with a bachelor's degree or above). In order to achieve this economic development goal, the government actively seeks living space for talents to update industries. However, this is hindered by the fact that rural land and informal housing account for a considerable share. In addition, the fire and crime risks in urban villages with poor building conditions and environment are related to the responsibility and performance of government management. Therefore, although the government does not directly participate in the informal housing institution, its existence plays a dysfunctional role in the government's political and economic goals, which forms a conflict between the local government and the rural collective in the distribution of land resources. In Shangcun Village, the occurrence of such a conflict was postponed because the legitimacy of the executive power was impacted by the fierce resistance of long-term activists to land expropriation. Under the guidance of the central government, the local government also needs to maintain a balance between economic development and social stability. Therefore, this conflict often needs to be alleviated by the high amount of land acquisition compensation provided by the government. As the property values in the urban areas were pushed up by the land finance, the urban renewal projects in Shenzhen have entered the stage of reflection and slow development. Such conflicts among

interest groups are still potential.

As the main actors of the urban formal housing market, developers are investors and implementers of specific land development projects. When faced with the shortage of urban land in Shenzhen, redevelopment of urban villages has become a popular business model that the developers are seeking. They hope that by investing with price far below the threshold of the traditional bidding, they can obtain land development rights, so that they can maximize profits from the difference in land rents before and after the redevelopment (Deng & Deng, 2021). Similar to the government, as the stakeholders of urban land development, informal housing on rural land is an obstacle for real estate developers to invest in urban land.

In short, as shown in Fig. 3, for external groups, those who do not participate in the IRH institution, ranging from local government, developers, mainstream media, to the surrounding formal housing residents, the dysfunctions such as insecure living environment and extra-legal housing institution are publicly dominant, the living function for low-income groups and the income function of villagers are recessive. However, for IRH actors, affordable residence and income are the most direct and manifest functions, while potential insecurity and informality do not cause direct conflict and are uncertain dysfunctions. Therefore, the credibility of IRH forms in the stable relation between tenants and landlords, considering the manifest functions and latent dysfunctions for their strategy for capital accumulation.

However, when the dysfunctions become manifest to the public and the actors, with a functional substitute offered to the actor, the institutional credibility may be altered. The conflict of interest between rural collectives, the government and real estate enterprises around land has formed manifest dysfunction. At a time when the imbalance between housing supply and demand calls for immediate solutions for the continual development of Shenzhen, it is urgent for the government to incorporate urban villages located at the space with strategic-relational significance into the blueprint of city planning. This will eventually make and the dysfunction further more manifest. By alleviating its dysfunctions and protecting some of the functions for a part of actors, the institution can be intervened. The transaction cost of this intervention is smaller, and the intervention method is more effective than that regardless its functions. The talent apartment transformation in Shuiwei provides a good case.

4.2. Shuiwei: limited dwelling function under regulation of government

There are very few state-owned lands in Shenzhen for public bidding and auction. In 2020, only 17 of the 31 homestead biddings and auctions were won by developers (Ministry of Natural Sources of the People’s Republic of China, 2020). At the same time, the government has issued a series of policies to regulate commercial housing prices, lowered the housing sales price, encouraged to develop rental market and to increase public housing supply, which has squeezed the profit space of real estate developers. Therefore, the urban

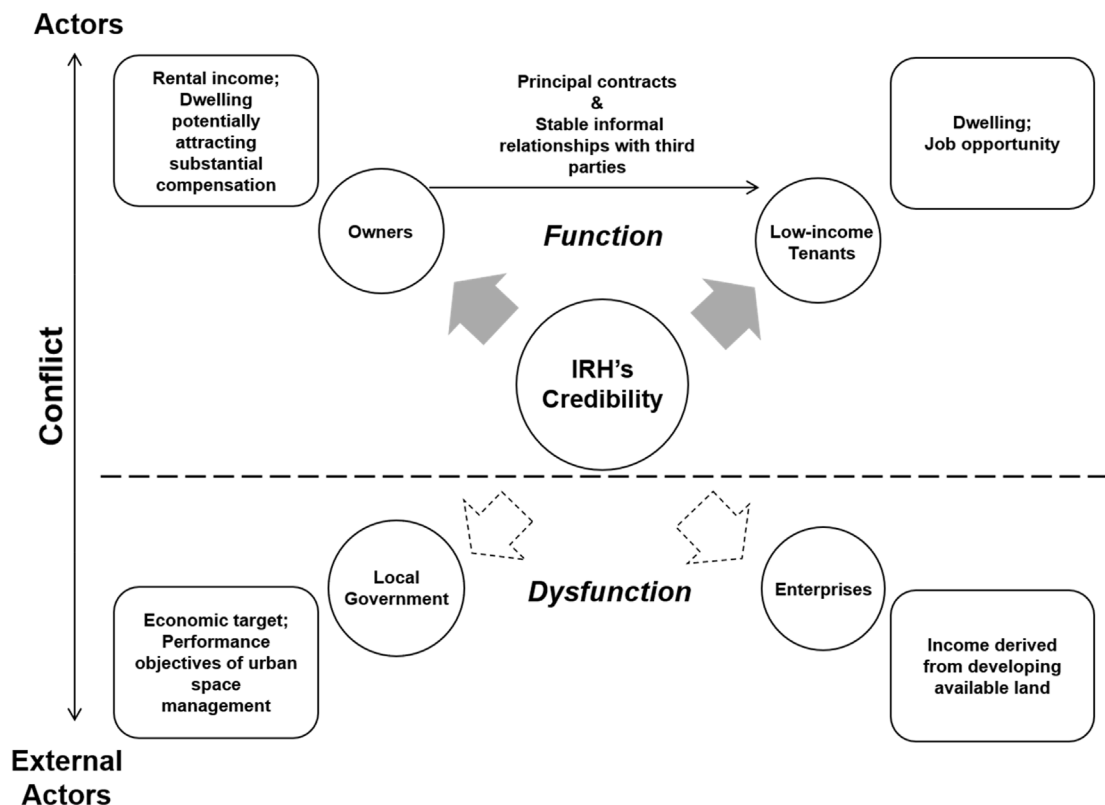


Fig. 3. RFC analysis of IRH in Shangcun.

village with a larger proportion of land and housing stock has become the main investment way for developers in Shenzhen. For the transformation of urban villages, there are two modes in Shenzhen: urban renewal and comprehensive renovation. Urban renewal is to comprehensively change the property rights and functions of IRH in urban villages through land acquisition, demolition, and reconstruction. This method takes a long time, has large transaction costs and involves complex stakeholders. Comprehensive renovation refers to the improvement of living facilities of IRH and the change of the functions of IRH according to the government plan, under the condition of keeping the property right unchanged. Renovation according to the actual situation of the house, reuse the space, improve the safety infrastructure, whose duration and transaction cost are moderate.

Ningmeng talent apartment in Shuiwei, Futian District, is the pilot case of comprehensive renovation in urban village. With the source provided by the village committee, we learnt that Shuiwei is adjacent to Huanggang, Futian ports and Guangzhou Shenzhen Expressway, covering an area of 234,600 m², with more than 600 villagers, more than 1500 registered residents and more than 30,000 temporary residents. In 1984, the village committee established Shenzhen Shuiwei Industrial Company. to operate and manage the collective assets of the village. In 2020, the village committee obtained 80 million CNY from property rental (Interviewee 22, member of Shuiwei Village Committee). In 2017, Shuiwei Village Committee, Shum Yip Group Limited Company (SYGL), and the government (i.e., Futian District Housing and Urban Rural Development Bureau) jointly signed a contract to promote the renovation of a part of the urban village. The village committee gathered the owners of 35 IRH buildings constructed in 2002 for discussion and negotiation about the



Fig. 4. Residential and commercial environment of Shuiwei after the renovation (photos taken by the first author).

renovation (Li et al., 2021). Some of them have moved abroad, so the renovation has little impact on their living, and they consider more about the impact on income (Interviewee 23, member of Shuiwei Village Committee). Finally, it is decided to transfer the 10-year usufruct of the IRH units above the second floor of 29 buildings to SYGL, which were upgraded and transformed into 504 talents apartments (Li et al., 2021). The renovation program involved a transformation area of about 8000 m² and an investment of 40 million CNY to upgrade its internal layout and external infrastructure, so as to improve its residential safety, convenience, comfort and aesthetics. The residential and commercial environment is shown in Fig. 4. The transformed rooms have various types, with an area ranging from 15 to 55 m² (Interviewee 25, enterprise staff of SYGL). Villagers sublets the redecorated IRH to SYGL at an average price of about 75 CNY/month/m², and it is guaranteed that the rent increases by 6% every two years. The government, Housing and Urban Rural Development Bureau of Futian District, serves as the project supervisor. After the completion of the IRH transformation, the property is leased from SYGL to the government at the price of 150 CNY/month/m² as the district public rental housing, which is distributed to the employees of key enterprises and social organizations recognized by the competent government departments in Futian District. The lease term is 3 years (Interviewee 25, enterprise staff of SYGL). These program takes only two years from 2016 to 2018 and 40 million CNY to finish (Interviewee 25, enterprise staff of SYGL). Compared with the urban renewal projects, which often takes over five years, the cost is much lower, conflict is less, and the intervene is more effective.

The comprehensive renovation of Shuiwei Village can be regarded as having strategic-relational importance in specific spatio-temporary location. Shenzhen's new urban development plan based on industrial land upgrading requires the inflow of skilled talents. On the other hand, low-skilled migrant workers are no longer needed. In this sense, the transformation of the informal housing institution in urban villages can achieve the local government's gentrification strategy. The geographical location and housing of Shuiwei Village are economically advantaged. Futian District covers a number of enterprises that are essential for Shenzhen's development. These enterprises, coming from various fields such as finance, energy and computer industries, demand a lot of talents. According to the Shenzhen Talent Housing and Public Rental Housing Management Measures, due considerations should be paid to factors like location, rent or price, housing quality and decoration standards when planning and designing the talent housing projects. To a very large extent, the informal housing in Shuiwei Village meets such demand. By retaining the function of ordinary informal housing for owners, the project also alleviates the existing dysfunction by offering resource to reconstruct the relation between actors. The manifest functions and latent dysfunctions make the formation of the new institution creditable.

After the government and enterprises participate in the transformation, the actors, functions, and the credibility logic of informal real estate institution have changed from a framework similar to Shangcun case to the framework as shown in Fig. 5.

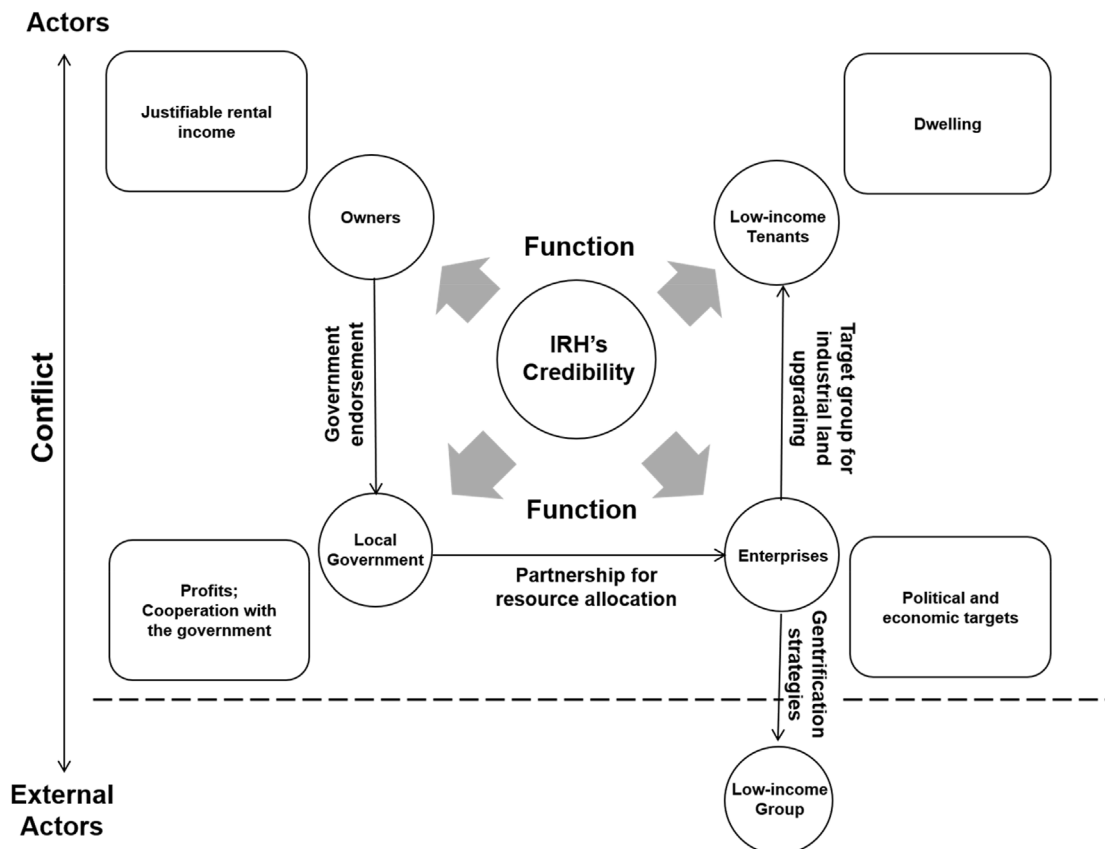


Fig. 5. RFC analysis of IRH in Shuiwei.

The actors participating in IRH are no longer only low-income tenants and IRH owners, but become IRH owners, enterprises, government, and qualified tenants. Through in-depth interviews to understand the owners' perceptions on the transformed IRH institution, it is found that, for them, IRH is incorporated into the public housing system without changing the property right, and the rent is charged as usual, so the transformation is acceptable. Moreover, it ensures a certain increase and does not lead to their economic losses, which even offered a free decoration for their houses. Furthermore, the participation of the government has further guaranteed the safety of this informal property, and the transformation of enterprises has improved the space quality. The transformed IRH not only retains the original economic function to the owner, but also alleviates the dysfunction of the original IRH, including the potential conflict that may be caused by the risk of extra-legal rental activity and the poor living conditions that no one is responsible for improving. However, the transformed IRH reduces the possibility of urban renewal, which can bring greater economic growth. It may be the dysfunction of renovated IRH for the owners, but the 10-year formalized and guaranteed usufruct by government can bring certainty and safety to the property right.

SYGL is a comprehensive enterprise wholly owned by Shenzhen government and directly managed by State-owned Assets Supervision and Administration Commission of the People's Government of Shenzhen Municipal. In 2021, the total assets of SYGL was 159.7 billion CNY and the total net assets were valued at 47.9 billion CNY. The total size of land reserve exceeded 10 million m². Moreover, it has owned and operated three expressways and one large bridge, with a total mileage of nearly 200 km. In the state-owned land auction market, SYGL met its land acquisition targets in the third round of centralized land sales in 2021 and the first round in 2022. Ningmeng talent apartment of SYGL is not completely market-oriented, so its main profit comes from the rental income provided by the target tenants and the government. The project has been mainly run on the long-term profit model with guaranteed principal and low profit. At present, the rate of return of the project is still only 0.12%, which is much lower than the assessment standard of 8.3% return on investment of state-owned enterprises. Therefore, increasing rent gradually has become the method to improve profits. Under the current economic background that the government encourages the development of the housing rental market and the saturation of state-owned land, the transformation of IRH into long-term rental apartments has become a future exploratory investment for developers. With the liberalization of the urban village housing rental policy, developers have begun to "hunt" the urban village rental market, trying to take a share of it. Nonetheless, there is uncertainty in the sustainable operation of this rental model for housing enterprises because its profit will be affected by the government's future rent limit policy. SYGL staff said that although the profit is not high, it is a pilot project deserve more exploration and it is a social responsibility for a state-owned enterprise.

For the government, the residential function of IRH for low- and middle-income groups has been recognized to a certain extent, so they kept the function of providing dwelling for middle-income and qualified groups. Additionally, the rise of surrounding house prices leads to the rise of demolition compensation cost. Compared with the urban renewal mode of the demolishing SPRH, the comprehensive rectification mode of selecting qualified IRH for improving supporting facilities has lower transaction cost. Welfare policies such as low-cost housing can attract young talents to work and start businesses in Shenzhen, increase human resources and maintain economic vitality. The integration and redistribution of existing housing, rather than reconstruction, will help solve the asymmetry between housing supply and demand by digesting the housing stock. Furthermore, as a part of the city, the IRH is improved in terms of aesthetics, comfort and convenience also brings space upgrading and optimization to the city. These are the functions of renovated IRH perceived by the local government. These functions fall within the criteria for evaluation of local government's political performance by the central government in China's state entrepreneurialism. The dysfunction is the informal way to formalize this informal property rights housing institution. The property right of IRH incorporated into the public housing system is still not recognized and protected in the legal sense and does not have legality, but the transfer of its usufruct right has been formally recognized and possess legitimacy in the society. In order to adjust the conflict between extra-legality and legitimacy, the government tried various approaches. Specifically, the government builds up the perceived tenure security through various mechanisms like "maintaining official meeting records", "issuing official letter instead of certificate", and "providing on-site guidance" (Li et al., 2021). On the one hand, although this innovative informal governance method temporarily shelve the illegality of IRH, it is a breakthrough attempt to optimize people's living environment and quality in combination with the actual situation of urban areas. On the other hand, informal government mechanism will further strengthen the importance of government management in the informal housing market, involving higher transaction process and transaction cost.

For tenants who meet the standards, public housing supervised by the government is credible. An interviewee in IRH, who lives in a 22.5 m² single room with a monthly lease about 1900 CNY, said:

"I'm very lucky to get the chance to live in the talent apartment. The rooms here are well equipped. In addition, the rent is just about half of the rental price nearby. I have bought many of the furniture and decorations." (Interviewee 13, Tenant of Shuiwei)

Their property rights are informal or incomplete from the legal perspective but that will not affect the main residential function undertaken by IRH due to the official allocation procedure supported by government. Tenants are also willing to invest in room decoration. Moreover, there is little perceived conflicts, as the property rights and tenure are clearly presented. The tenants show no worry about unreasonable increase of rent, because the rent of IRH as the public housing is supervised by government and guaranteed to be lower than market value.

Although IRH in Shuiwei also undertakes the function of residence, the actors mainly refer to the "qualified" tenants, who is middle-income group. Some low-income tenants who do not meet the standards recognized by the authorities have to move out and move into other IRH, which is more remote, may have worse living environment but lower price. The functions of transformed IRH change from meeting the dwelling needs of middle- and low-income groups to meeting the dwelling needs of middle and high-income groups. When transformation of IRH is promoted rapidly in Shenzhen, it leads to gentrification and exclude the low-income people from the urban area. The renovation of IRH with existing residential properties to provide long-term rental apartment does not actually increase the

overall supply of rental housing, but only cause changes in the supply structure. With the prevalence of IRH renovation, more affordable housing is required to alleviate housing inequality and lack of dwelling for low-incomers. However, the construction of more affordable housing involves the shortage of government funds, which is a long-term latent dysfunction waiting to be solved. Same consequence happened in Hong Kong. Reallocating private housing sites for public housing may push up the supply of public housing for the short term, but in the long run, the new housing initiative can lead to reverse gentrification effects (Liang et al., 2020).

To sum up, when the relationship between land supply and demand in Shenzhen is tense, the dysfunctions and functions in the independent development of informal housing do not meet the political and economic goals of the local government under the urban developmentalism. The conflict of interest between the government and the rural collective leads to the emergence of dysfunction. The credibility of informal housing is threatened by the possible intervention of the government and enterprises. The IRH renovation project in Shuiwei Village involves the reconstruction of the relation between different actors. The conflict relationship between the government, enterprises and rural collectives on rural land is transformed into cooperation. In order to achieve its goal of economic and industrial transformation, the government abandoned the tough land grabbing and expropriation, provided documents and funds to endorse the transformation and operation of informal housing, maintained the income function of IRH to its owners, and used the

Table 2
Summary and comparison of the two IRH cases.

Case	Relations	Functions	Dysfunctions	Credibility
Shangcun	<ul style="list-style-type: none"> The contractual relation between the tenant and the landlord is assumed as a principled contract recognized by both parties and a stable informal relationship with a third party The housing ownership relationship between the owner and the village committee is clarified in the form of internally recognized documents The potential conflict between informal housing collectives and external actors, including the government and enterprises, is affected by the degree of dysfunctions and the urgency of government's goal achievement 	<ul style="list-style-type: none"> Providing affordable dwelling function for low-income people Providing the rural collective with non-agricultural income and the economic function of improving the efficiency of rural land use 	<ul style="list-style-type: none"> Potential insecurity Informality Distributional conflicts with government and enterprises 	<ul style="list-style-type: none"> Internal actors generally hold supportive perception The institution is stable Potential conflict comes from the intervention of external actors
Shuiwei	<ul style="list-style-type: none"> The cooperative relation between the village collective and the government is based on the fact that the government strategically gives up the short-term economic goal to maintain the income function for village and offer legitimacy of the housing, and to achieve government's own political-economic goals The contractual relation between the village collective, enterprises and tenants is maintained through the informal mechanism endorsed by the government and clear terms of right and responsibility There is a long-term and stable cooperation between the government and enterprises for resource allocation, so enterprises have flexibility in pursuing the goal of maximizing profit 	<ul style="list-style-type: none"> Providing affordable residence functions for the target population Providing stable non-agricultural income function for rural collectives and the legitimacy function Providing the government with urban space upgrading and population structure regulation functions Providing profit and maintaining cooperation with the government functions for enterprises 	<ul style="list-style-type: none"> Complicated distribution procedure and over-reliance on local government allocation may lead to potential efficiency problems New distributional conflicts caused by exclusion 	<ul style="list-style-type: none"> Internal actors generally hold supportive perception There are fewer conflicts The institution is stable, and has been promoted and applied into other districts

residential function provided by IRH to complete the replacement of population structure in line with their gentrification strategy and economic goals. In the new IRH institution, rural housing owners continue to hold the ownership of housing and usufruct. Enterprises assume the responsibility of physical transformation and achieve income from the secondary transfer of housing. The government has the power to distribute the right to use, so as to achieve the strategic goal of population control. Target tenants exercise the right to use in accordance with the governmental rules, and their functions are shown in the constructed relation with stability. At the same time, new dysfunctions also occur. The low-skilled and low-income population is excluded in the process of reconstruction, resulting in new distributional conflicts. Overall, different actors tend to hold supportive perception of the renovated IRH. The possibility of conflict between actors is little at present, and the housing development model has the trend of extension, so the changed IRH institution has high credibility for its actors at present.

5. Dynamic disequilibrium: A conceptual discussion

Through the comparison of the two IRH cases in Shenzhen, the findings of which are summarized in Table 2, it can be found that the similarity between them is that credibility of IRH mainly comes from their strategic-relational significance, which integrates different functions to directly meet various actors' needs under the current socio-economic background in a certain period, and its dysfunctions have not become the main social conflict in the short term. Differences lie mainly in the space with the different economic components, actors, relations between village and government, resulting in the transformation of the potential conflict relationship into the cooperative relationship. The maintained and added functions, and the reduced and changed dysfunctions signify that institutions even with same form can function differently in different contexts. According to the performance of functions or dysfunctions, the institutional credibility varies, so actors make strategic choices and restructure relations. When the new relational structure can maintain or even improve the original functions, and the dysfunctions are latent, the new institution is formed and becomes credible.

According to the credibility thesis, the institutional credibility is completely endogenous (Ho, 2016). Thus, formalization measure is a bad idea for the informal housing institution with high credibility (Sun & Ho, 2018). This is also the reason why the ideal institutional design of the government without considering the reasons for the existence of the institution will fail, such as the failure of forced demolition of small property rights housing in mainland China (Ho, 2018b) and poorly-credible opening-up measure of gated communities (Yau, 2022). However, the innovative formalization of IRH in Shenzhen implies that, at meso level, the institution and institutional credibility can be effectively reshaped by actors who consider the institutional function carefully within its complex network systems and have the economic and social resource to offer functional substitutes for the previous institution. As Lai (2018) claimed, plans work in the face of complexity as manifested by the urban development process. The reshaping process is linked with the concept of dynamic disequilibrium in the credibility thesis, which refers to the institutional change as a perpetual alteration (Ho, 2016). Through the relation-function-credibility analysis of IRH in different urban villages, it can be found that the changed formation mechanism of credibility involves the maintenance of main functions, the manifest process of functions, adding new function, the alleviation of dysfunctions, and the latent process of dysfunctions in a relational reconstruction. Specifically, the original IRH institution undertakes the function of providing affordable dwelling for the middle- and low-income groups, earning rent income for IRH owners, and improving the use efficiency of rural housing through the informal market mechanism. The informal housing institution is credible for its actors because these institutional functions are manifest and direct for them while most of the dysfunctions remain latent and uncertain. Meanwhile, due to its latent dysfunction to actors, this credibility is temporary. When there is a substitute institution, which can provide similar function and partially alleviate the dysfunction, IRH can be effectively but temporarily intervened. After investment and renovation, IRH, through government planning, undertakes the functions of providing formal public housing settlement for qualified tenants, achieving the development objectives with less transaction cost for the government, ranging from improving the urban spatial quality, attracting talents resource, and optimizing land and housing supply structure. For the enterprises, the renovated IRH also take the functions of earning profit and exploring the possible profit margin of investing in long-term rental apartments in IRH. For the IRH owners, the renovated IRH keeps the use efficiency of rural housing and undertakes the function of providing stable and even more formal income. Besides the remained functions, governmental informal mechanism to strength the security of tenure also enhances the credibility of the property rights, through which the dysfunctions of original IRH institution have been alleviated and new dysfunctions, such as possible inefficiency and exclusion, still keep latent for the society. In other words, the exclusion of low-incomers caused by gentrification and the lower efficiency of housing allocation become other dysfunctions, but the potential conflict associated with it has not been dominant. The low-incomers who do not possess the property right and the resource to provide more competitive functional substitute are excluded from the decision-making process. This has resulted in the further marginalization of vulnerable groups in the urban society and requires more discussion about right to the city versus right to the property.

Functional substitution become an important concept in dynamic disequilibrium or institutional change. It requires the resource and ability to make institutional function changing from latent to manifest and its dysfunction changing from explicit to implicit, so that the institutional change has legitimacy for actors, requires less transaction cost, and cause fewer conflicts. Therefore, the government or enterprises, such actors with resources and capabilities, can often reconstruct the relation of the existing institution by providing functional substitution, and develop the institution in accordance with their own interests to achieve new functions. Meanwhile, in the process of offering functional substitution, in order to gain effectiveness and stability, it is necessary to conduct a detailed analysis of the institutional functions in a specific time and space, as far as possible to include more diverse interest actors in the original institution into decision making process to consider their needs. Otherwise, the need for the original institution is just shifted rather than eliminated, leading to the persistence and resilience of institution. A "decision network" planning tool can help planners make multiple and linked decisions when facing multiple stakeholders with multi-attribute preferences (Lai & Huang, 2017).

Due to the existence of dysfunctions, stable status is never reached, and the actors' interactions can be viewed as a continuously

changing and conflicting process. In the credibility thesis, Merton's functionalism is criticized for ignoring the effect of conflicts on social change (Ho, 2018a). The dysfunction is understood as the socially disruptive effect to cause aberration and social change. It is believed that the conflict and instability as the normality are also driving force the social change. However, sometimes dysfunction is also related to the conflict and instability, and it can be applied to understand the change without social disruption.

Even though gentrification is also unavoidable in IRH renovation, it should be recognized that compared with the urban renewal model, comprehensive renovation incurs lower transaction costs and is more aligned with the goal of sustainable development. Urban renewal can bring one-time huge incomes to the villagers through demolition compensations, financial incomes to the local government through land transfers, greater profits to the real estate developers through the sale of houses, provide more brand-new houses and create considerable economic value. However, what follows are the rising house prices, the intensification of housing inequality, the exclusion of more low- and middle-income groups, and the waste of resources in the process of demolition and construction. Although IRH rectification has also caused gentrification and reduced economic growth to a certain extent, it is an innovative pilot work that fits more with social goal rather than economic goal than the urban renewal model with demolition in sustainable development. It is a kind of advancement, but in the long run more careful review should be tracked.

6. Conclusion

From the property rights theory to the credibility thesis, the concept of institutional function has offered an essential perspective to understand the persistence of an informal and suboptimal institution. Coupled with the SRA and meso-level analysis of the functions, we can see that the institutional functions are diversified, and even conflicting. How these functions perform depends on the specific spatio-temporal context, which eventually influences the institutional credibility and actors' strategic choice. The property rights institution formulated by the government is formal and clear. Yet, with the increasing population and limited resources, this formal institution loses its social function and gradually runs into dysfunctions. This condition is vividly illustrated by the growing unaffordability of formal housing and social inequality. Thus, more forms of property rights institution emerge in the housing market. IRH is such an institution to provide affordable settlement for the middle- and low-income groups. Shangcun is a typical urban village with IRH in Shenzhen, involving actors like villagers and tenants. The credibility of IRH in Shangcun comes from its manifest dwelling and income functions for the actors. These functions are performed through the informal rental housing market. However, as the population increase and the need of affordable housing surges in Shenzhen, IRH shows an increasing economic value and its density has increased rapidly, forming adverse spatial features like overcrowding buildings and narrow public roads which pose imminent fire hazards on the building occupants. With statutory backup, the informal housing institution also cannot protect the tenants' rights. To alleviate the dysfunctions and achieve their goals, the government and state-owned enterprise invest in the IRH institution in Shuiwei and try to formalize the informal property rights within ten years by leasing the small property rights houses out as public housing flats for attracting talents resources. The renovated IRH is institutionally credible due to its secure profit function for enterprises, and the IRH owners are subject to the government's regulation. Such IRH provides credible dwellings for qualified tenants and gentrifies the area.

This research compared two IRH cases in Shenzhen to figure out why and how the institutional function framework is reshaped in the institutional change process. It is argued that the formation and reformation of institution and its credibility should be understood with due consideration of the interaction of function and dysfunctions in specific spatio-temporal context. Institutions even with same form can function differently in different environments. According to the performance of functions or dysfunctions, the institutional credibility varies, so actors make strategic choices and restructure relations. When the new relational structure can maintain or even improve the original functions, and the dysfunctions are latent, the new institution is formed and becomes credible. Manifest functions and latent dysfunctions contribute to the institutional credibility. Functional substitution plays a crucial role in the performance of institutional change. Existing studies on institutional credibility mainly focus on the persistence of institution from the functional perspective but understand the changes as historical institutionalism, ignoring the discourse of function and relation. This research contributes to the enrichment of the credibility thesis by illustrating the dynamics of institutional functions and relations in institutional changes and offering more empirical evidence to understand dynamic disequilibrium.

Meanwhile, there are also some limitations of the research, including the potential bias from subjectivity, sample method, and small sample size. Firstly, in the in-depth interviews, the narration of the interviewees and the understanding of the interviewees may both have subjectivity, and the data collected are the perception of actors on specific occasions. Whether this view is lasting or not may lead to bias. Therefore, the researcher confirms the respondents' perception during the interview to reduce the understanding error caused by subjectivity. Moreover, because the target population list is not available, the snowball sampling of respondents can reduce the representativeness, but at the same time, different group characteristics are guaranteed as much as possible in the process of screening and analysis, so as to pursue the richness of data. Finally, the limited sample size of interviews may also lead to biased inference. Therefore, the generalizability of the conclusion of this study is limited, and the conclusion should be used with caution when explaining other cases. As the credibility thesis and SRA emphasize, institutions are developed based on specific time and space and are diachronic. Therefore, the case of Shenzhen may not represent the national situation.

Declaration of competing interest

None.

Acknowledgements

This research received no external funding.

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