

Article

Informal Land Development on the Urban Fringe

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Abstract: Urban fringes are an important part of urban growth. In addition to formal land markets, a variety of informal land development methods make urban fringes the most dynamic and complicated areas. The analysis of land transfer and development systems in these areas opens a significant window to understanding the modern processes of urbanization and human and property rights in urban areas in China. This study uses Shanghai as a case study target and identifies specific modes of local land development and investigates how collective participants, government agencies, regulatory policies, and various actors are involved in land development and decision making. The in-depth analysis and case studies indicate that the variety of informal land markets in Shanghai reflects the inherent demands of the market for allocation of land resources within the constraints of the given system and against the given development background. However, conflicts between the mode of the market and the existing institutional constraints reflect the uncoordinated development of the land and the economic and social development around the urban fringe. The empirical results of this paper suggest that government administration should improve the land market system, strengthen the planning of control and guidance, rationalize the distribution of interests in land development, and strengthen the supervision of management of land development enterprises. Instead of fragmented aspects, this paper proposes a systematic analytical approach to understanding the informal land development in a city from an urban planning and land resource management perspective.

Keywords: informal land development; collective land; urban fringe; land market; Shanghai

1. Introduction

The rural–urban fringe lies between the built-up urban and suburban areas of the central city. This area involves one of the most complicated social and demographic changes and transitions in land use [1–3]. Fringe areas are characterized by an almost complete absence of non-farm production activities, urban residential dwellings, landscaping, and urban lifestyle. These areas usually do not have a complete range of urban services [4]. Local and central governments struggle to coordinate and regulate land development with the use of zoning or other planning tools [5–7]. Meanwhile, urban fringe areas demonstrate the extension of future urban zones contiguous with the political boundaries of the central city [8,9]. Urban growth creates distinctive land use modes in fringe areas reflecting both opportunity and conflict in urban activities [1]. Therefore, how land is treated from a planning or management perspective in the fringe area reflects the social, political attitudes, and values of a given region.

As in other cities around the world, urban fringes are critical areas in China for the urban expansion of metropolitan areas [7]. The majority of urban development occurs in these areas [10–13]. The institutional change during the transformation from the centrally controlled system to a

market-oriented economy created multiple formal and informal land development approaches [14–17]. Formal land development dominates the urbanization process as a reflection of the marketization logic that has been promoted by the central government beginning with the economic reforms of the 1980s [10,18,19]. Meanwhile, land-resource allocation, property rights, and development sustainability cause land development in fringe areas to be more complicated than in urban centers, where market-led land development dominates [11,13,20].

In addition to the formal land development procedures in the land market, a variety of informal modes of land development, such as collective self-controlled land developments, are broadly taking place in the coastal areas of China [11–13,21,22]. Accompanying the informal development in these regions, a series of phenomena emerge, such as rapid expansion of land development activities on former agricultural land, complexities of land rights and land use rights, and a variety of income and land-resource allocations. The analysis of systems of land transfer and development in such areas opens a significant window to understanding of the modern process of urbanization in urban areas in China [17].

The majority of the literature on the informal land development in China so far focuses on the local experimental success of land development activities and the related social, economic, and environmental issues. For instance, a large number of studies concentrated on how land use reforms in China unlocked the process of land redevelopment in the central city [10,17] and incentivized in situ urbanization processes from below [11–13,21]. They focused on the critical social, economic, and environmental conflicting issues, such as compulsive land expropriation, urban village, township and village enterprise, as well as agricultural land loss. There is a lack of systematic analytics on the variety of informal land development approaches in a city from an urban planning and land resource management perspective.

This study uses Shanghai as a case study target and identifies specific modes of local land development and investigates how collective participants, government agencies, regulatory policies, and various actors are involved in land development and decision making. This paper analyzes the characteristics of unconventional land-integration, development, and transaction modes, with a focus on the development process and mechanisms of operation. We collected data from in-depth interviews with urban developers, urban planners, and urban land use administrators, as well as examining various government policies and planning documents, and analyzed them to determine the four modes of informal land development in Shanghai.

The next section reviews approaches to land development that appeared following the economic reforms of the 1970s. This is followed by a discussion of research approaches. The empirical results are then presented. The paper concludes with a discussion of the findings in relation to the relevant literature.

2. The Evolution of Land Development in China

Land development in China has been heavily influenced by the processes of political, social, and economic reform. From 1949 to 1978, under the socialist command economy, most of the land in the country was owned either by the state or by rural collectives [23]. The state allocated land for residential or industrial uses [24]. Under the planned economy system, the state allocated land and funding for the establishment of state-owned enterprises [25]. State and local governments determined the production and profit to maintain economic growth and social development at a certain level. This land development policy hindered urban redevelopment and limited the economic development of the country [26]. A turning point in the development of this system was the introduction of a land use rights system in the early 1980s and a land market in the late 1980s [25]. In 1988, land use rights could be transferred with compensation as officially entered into the Constitution of the People's Republic of China, in accordance with relevant legislation. Under this policy, all land across the country is owned by the state, but local governments and communities could commercialize their land use

rights. Land use rights were separated from land ownership and land use rights were able to be traded between the public and private sectors [18].

2.1. Formal Land Development

After 1978, reforms in the social and commercial urban housing systems, the upgrading of urban transportation infrastructure, and the ongoing boom in industrialization resulted in a growing demand for urban land development on the urban fringes of major cities [10]. However, planned urban land use and the land-allocation system restricted population and economic growth in urban areas and created huge land price differentials between urban and rural areas [27–30]. To regulate land development and realize the full potential of land value, the state asked major cities to establish a uniform land market. Although land ownership rights remained unchanged, the state and collective landowners were allowed to transfer their land use rights through land markets. Thereafter, land use right transactions in urban areas created a primary land market. The transactions through primary land market formulate the formal land development procedure and represent the process of market-driven urbanization in China [19].

2.2. Informal Land Development

Given the large differences in land prices between urban and rural areas, and the rapid growth of the rural economy during the period of economic reform, villages and townships in coastal provinces initiated land construction for non-agricultural uses, mainly for industrial enterprises [12,21,31,32]. Since the original land use type in these cases was collectively owned agriculture, and land ownership rights are held collectively by local peasants, land use rights cannot be transferred to private or public organizations for long-term uses, meaning this land cannot be used to build commercial buildings. Nevertheless, land use legislation (People's Republic of China Constitution (Amendment) [1988]) has given permission to the owners of land use rights to lease the land out for industrial uses [31]. This policy unleashed enthusiasm for land and economic development [33].

After years of primitive capital accumulation, local villagers were eager to improve their housing and rural infrastructure [11,13,31]. Such amenities could not be provided by the state because these areas were classified as rural. Rural collectives, especially those in more affluent villages, planned and developed housing development projects and allocated entire housing subdivisions to villagers. In the process, agricultural land was converted to factories and housing subdivisions without direct expropriation of state land. Land ownership remained in the hands of rural collectives [11,34,35]. This type of land development is called informal land development in the literature [16,36]. The land use rights transaction activities were termed as the secondary or tertiary market [26,37,38].

2.3. The Coexistence of Multiple Land Development Modes

The introduction of the land market helped increase the efficiency of land use and led to the involvement of multiple stakeholders in central area urban land development [39]. Meanwhile, the informal land-development activities dominate fringe areas, considering the massive success of the township and village enterprises and the undergoing fastest urbanization process in the world [14,15,40]. The hybrid system of mixing state and collective land ownership, market/non-market transfer of land use rights, and the previous path-dependent land allocation system was further linked to the state system of administration and planning, which is contingent upon local geographic and social [19]. This creates unique land resource allocation and urbanization processes among Chinese cities.

Based on empirical study results, Qiu and Xu [19] summarized the land development activities in Shanghai into five modes: State-led Market-based Land Development, Informal Land Development, State-led Land Redevelopment, State-approved Independent Development, and Megaproject-based Land Development. The study also found that the land development processes in the city are characterized by the divergent and contingent local conditions and the spatiality of government

policy. Instead of the differences among regional land development modes illustrated in the literature, the study identified the variety approaches inside one city boundary. Therefore, a comprehensive understanding of the informal land development approaches and urbanization processes cannot be achieved without a systematic analysis of all types of informal land development activities.

To understand the informal land development in Shanghai, this study needed to investigate the following: the process of land development organization; the allocation of financial investments and incomes; the roles of local governments, collectives, villagers, land developers, and land use right holders in the process; the leading roles that those involved play; how responsibilities are shared; and the challenges faced by each development mode.

3. Data and Methods

3.1. Urban Fringe in Shanghai

Since 1978 when economic reforms were initiated, Shanghai has experienced rapid growth and development, and has been regularly found to be one of the most rapidly developing cities in the world since the 1980s. The urbanized land area of Shanghai in 2010 was almost three times greater than in 1987. Its urban landscape, and especially the spatial distribution of its population and manufacturing firms, has changed dramatically.

To curb the excessive expansion of urban areas, the Shanghai Urban Planning and Land Resource Administration Bureau delineated the Concentrated Construction Zone in 2006 that includes 104 industry zones (Figure 1), which form the city's future urban boundaries. According to the Shanghai Land Use Master Plan 2006–2020 and the corresponding policies, the city will gradually expropriate collectively owned land within the concentrated construction zones and convert it to urban uses. The areas outside the delineated boundaries will be maintained as collective land and used for agriculture.

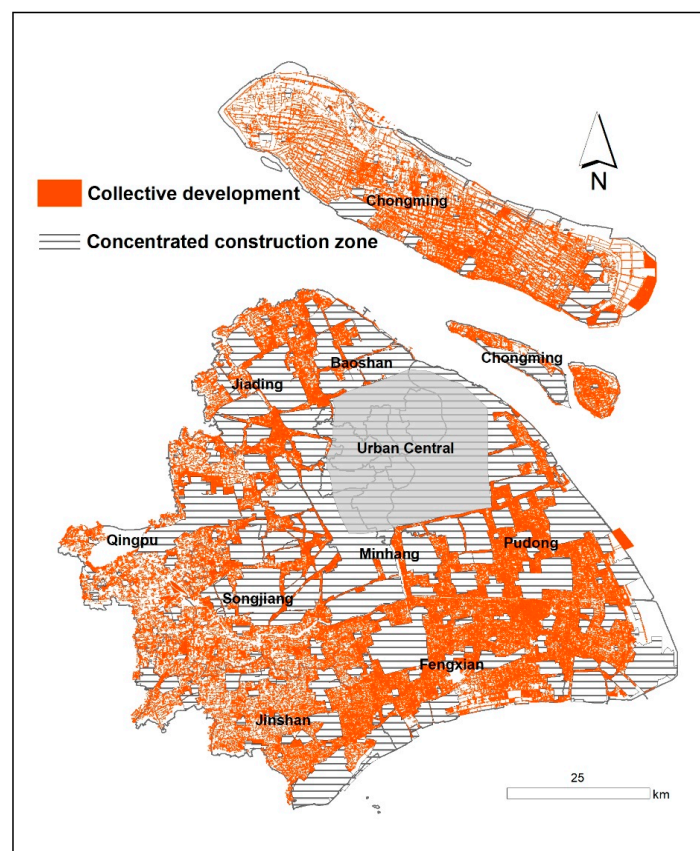


Figure 1. Urban fringes of Shanghai.

The political administration and economic reforms in the 1980s, motivated districts, townships, and villages to use land as one of the main resources to promote local economic development. This includes the not-yet-expropriated collective land that is located inside the concentrated construction zones and the collective land that is located outside the concentrated construction zones. The informal land-development activities are primarily concentrated around these intersections of urban and rural agricultural spaces.

3.2. Data Collection

To identify and analyze the modes of informal land development, both primary and secondary data were collected. In China, urban planners collaborate with the city government to make a long term master development plan of a city. Then land developers acquire the land and work with urban planners and city governments to re-zone the master land use plan into small parcels for construction [41]. In this process, urban planning administrators and urban planners impose significant influences on land development decision-making. Therefore, in this study urban planning administrators, urban planners, and land developers were selected as main interview subjects to investigate their perspectives and understandings on urban land development. The initial key informants were contacted using the Shanghai Urban Planning and Verifying Center as one of the key information sources. A snow-ball sampling was followed by asking initial key informants.

The field study campaign was completed during the summer of 2015. Seven government officials from the Shanghai Urban Planning and Verifying Center, the Comprehensive Planning Department, and the Huangpu District Urban Planning Office and the Shanghai Lujiazui Finance and Trade Center Administration Commission, two developers from the Shanghai Land Group Co., Ltd., Shanghai, China, and the Shanghai Pudong Real Estate Group Co., Ltd., Shanghai, China and one urban planner from the Shanghai Guangjing Urban Planning and Design Co., Ltd., Shanghai, China served as the source of primary data source. A semi-structured interview method was adopted by this study. Three major questions were asked to each interviewer: what are the land development modes currently/historically adopted by the city; what kind of role do all level government administrators play in each of the process; is there any typical case of each mode? Further information was obtained from each of the informants through email during the data analysis process.

3.3. Data Analysis

The study used thematic analysis to inductively generate the land development mode categories. First, we used organizational structure, existence of relevant subjects, management systems and relationships, and existing policy frameworks to identify the informal land development modes. Second, we built up a rubric to guide the interpretation of operating mechanisms and evaluate the performance of each mode (Table 1). Third, we looked at the representative cases to verify each of the development modes and review their performances based on their social-economic impacts.

As one of the four direct-controlled municipalities in China, the administration system of Shanghai is hieratically divided into city, district (county), township, and village. The village level of organization represents an agency of the grass-roots regime organization (township) stipulated by the constitution [42]. Village collectives own the rural and suburban land and administrate land allocation through village committee or economic organization [28]. Township is the first level of government administrative organization. Thus, the land source for development in China can only be state-owned or collective-owned. Land use rights can be held by collective, private, shareholding, state, or jointly.

Table 1. Informal land development mode evaluation rubric.

Aspect	Elements
Land Source	State-owned Collective-owned Both
Main Agent	Government Collective Developer Others
Method of Land Acquisition	Rent Expropriation Transaction Expropriation retention
Infrastructure	Government Collective Developer Enterprise Other
Type of Land Development	Land rental Property rental Property self-management Property transfer Land use rights transfer
Holder of Rights to Land	State Collective Both
Coordinating Entity	Government Collective Developer Enterprise Farmers Land or property user

4. Informal Modes of Land Development

4.1. Mode I: Village Collectives Act as Principal Agents and Property Is Developed Only for Rent

4.1.1. Structure

In this mode, the village collective committee spontaneously intends to develop land. Fragmented land parcels from groups of villagers or individual villagers are combined through land use rights rental. One or more village collectives act as the first-tier land developer and collectively establish a stake-sharing company. Then, they commission an urban planning organization to prepare a detailed control plan. After approval from the local government, the developer obtains development licensing, completes the development and construction procedures, and then rents out the land or properties. This village-level collective development relies on the government to provide large-scale fundamental facilities. Then the village joint-venture company improves other services on the site and acts as the chief manager of the land or property use rights (Figure 2).

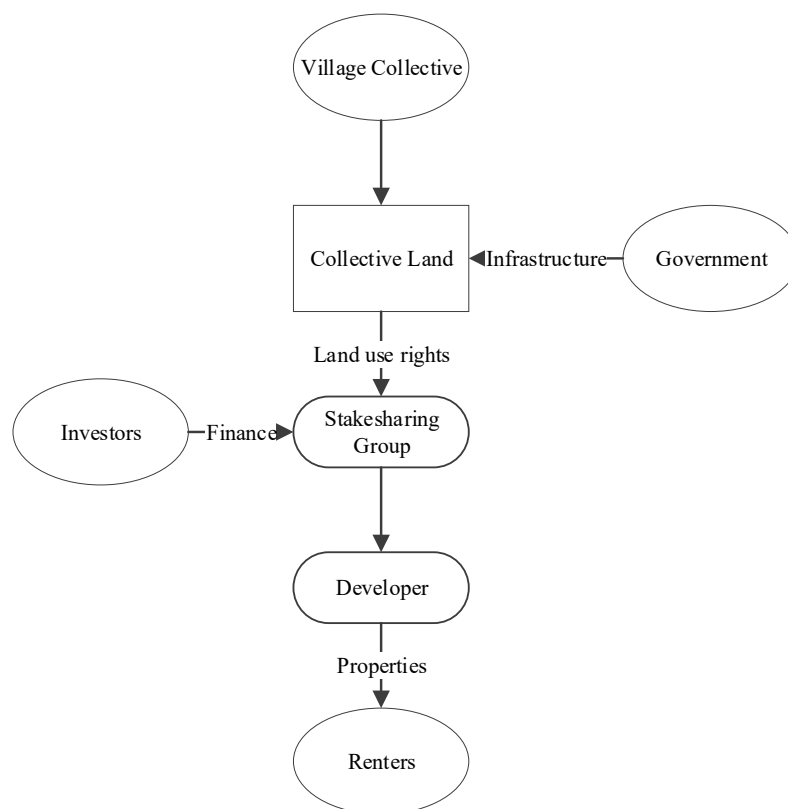


Figure 2. Village-collective-lead land development.

4.1.2. Operating Mechanism

The main body of this land development mode involves village collectives (villages), local governments, and groups of villagers or individual villagers. Land ownership remains within the village after development. The collective initiates a collective stake-sharing company and rents land from the villagers or group of villagers. Some of the improved land parcels are directly rented out and some are developed to be rented by standard industrial plants. For income distribution, the collective stake-sharing company retains a certain amount of money for the company's daily operating expenses, a certain amount is paid to local and central governments through tax and management fees, and the rest is paid as dividends that are returned to the villagers or village groups. In addition to obtaining part of their revenue from the collective stake-sharing company, the local government can attract more investment through the integration of land and by collecting tenants' taxes and corresponding management fees. Revenues are then returned to the locality through further investment in infrastructure and facilities.

4.1.3. The Problem

This mode of land development proceeds entirely from the bottom up, and local and central governments assume a managerial role. Governments are not involved in the specific operation of land development. This is different from the collective land-transfer pilot program of the Ministry of Land and Resources. In that program, the main project sponsor is the corresponding government, which acquires land from collective landowners based on the needs of industrial development or public facility construction. Nevertheless, in this mode of land development, the sponsor of the projects is the collective owner of the land and use rights. Transactions in collective land use rights originate from a collective's or individual's pursuit of maximization of the return from the land use. Because governments only play a role in the process of circulation, the spread of this phenomenon has been encouraged.

Even though this mode may have lower land development transaction costs, valuable land resources may be lost. The different attitudes of village collectives and the central government toward land management can result in large discrepancies in land prices. In this process, local villagers often ignore overall social and environmental interests and focus entirely on financial benefits. Thus, whether and how to integrate collective land and state-owned land into a unified market for management and supervision is a significant problem faced by the government.

4.1.4. Case Analysis: Minhang Jiuxing and the Jiuxing Market

The village of Jiuxing is located within the town of Qibao, Minhang District, Shanghai. It contains 1117 households and 3757 villagers and is a typical village located on the urban fringe; its land resources are rapidly decreasing. Before the 1980s, the village owned 5009 acres of land, but after several land acquisitions by the central government, the remaining non-agricultural land was only 1307 acres in the mid-1990s. In 1994, under the leadership of Enfu Wu, the village established Shanghai Jiuxing Holdings (Group) Co., Ltd., Shanghai, China, and built the largest construction and ornamental materials trade market in Shanghai using the remaining 1307 acres of land. During this process, Jiuxing did not rent out land and collect rent as they had done previously. Instead, the village used an entirely self-investment- and self-management-based business model. Throughout the process, significant efficiency was achieved in land development and the rented-out land was reclaimed.

As a result of this mode of land development, the village increased the yield of its per-unit area land use. In 1998, the village received 135 yuan per square meter of land use. This number grew to 213 yuan in 2002, 584 yuan in 2005, and 886 yuan in 2007. With this increase in land use revenue, the net assets and disposable income in Jiuxing climbed dramatically, for more than 10 years straight. The disposable income accounted for 40.5% of the total income of the top 10 collective villages in Shanghai. At the same time, through a collective economic shareholding system reform, the village divided its collective assets among individuals. The villagers enjoy income equity, according to the distribution aligned with the degree of work and dividends, on the principle of the sharing of land. With this continuous development, Jiuxing created a large number of employment opportunities. Not only are all the laborers in the village employed, but more than 600 new jobs have been created for unemployed locals. In 2003, the average annual labor income exceeded 30,000 Yuan, reaching 40,000 Yuan in 2007.

Even though this mode of village-led land development has achieved significant social and economic success, it faces specific problems and hidden dangers. The development process followed the prescribed procedure for the transition from agricultural to non-agricultural land, but no urban construction land use permits were obtained. The holding of its land use rights is not clear. Therefore, the land may come to be occupied by third parties, and the invested human, material, and financial resources may not be repaid. Further, to reduce operating costs, the Jiuxing market was only built two stories high with the upper level used for storage. This contradicts mega-city land use policies in the contiguously expanding urban space.

4.2. Mode II: Land Developers, Village Collectives, and Third-Party Enterprises Are Primary Joint Developers

4.2.1. Structure

This mode of land development is coordinated by a land development company in conjunction with a village or several villages that, through an agreement, form a joint stake holding company. The village collectives involved combine their land, relying on the financial support of an investor for land improvement. The development of the area to be improved follows one of two business models. One model involves rationalizing the land and selling it to the secondary land market in an auction. The other model involves having a third party commit to developing the various types of property for rental (Figure 3).

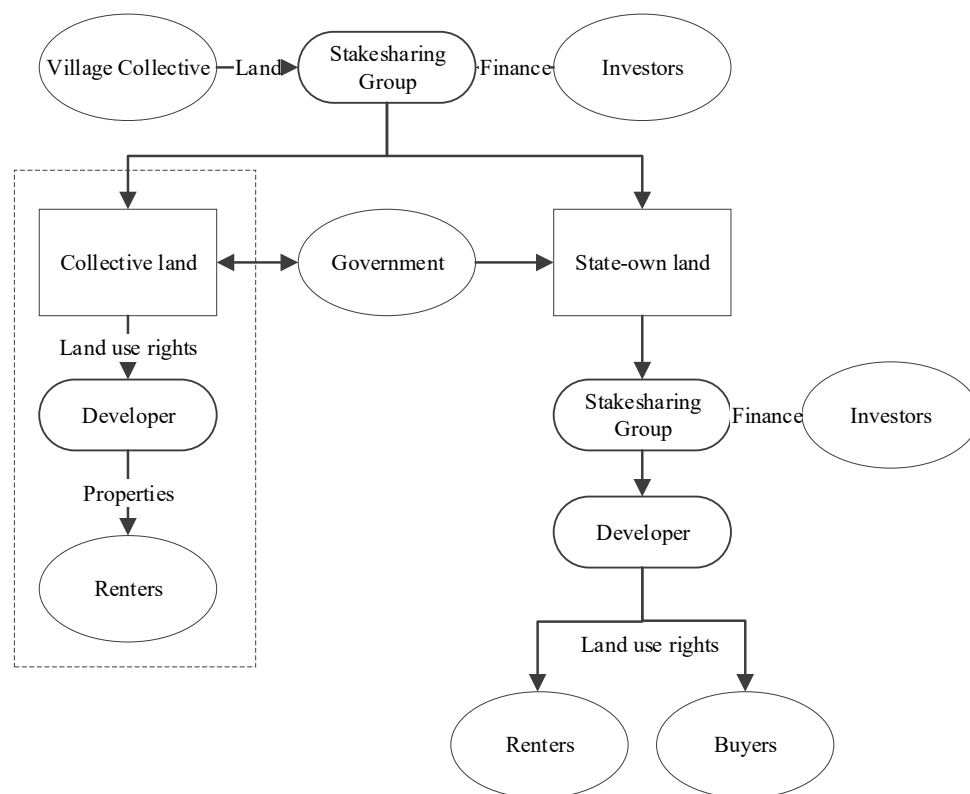


Figure 3. Land-development company, village collective, and third party enterprises as primary joint development.

4.2.2. The Operating Mechanism

The primary developers for this mode of land development are land-development companies, village collectives, and third-party enterprises. After development, rights to part of the land remain under collective ownership, and the remainder of the land is changed to state ownership.

For the land transferred to the state, the stakeholding company acts as an intermediary. Part of the payment for the land transfer is submitted to the central government, and the other part is returned to the stakeholders. Part of the returned is applied to company operating expenses including taxes paid to the government, part of it goes to pay for land leveling and to compensate costs, and the rest is paid to the villagers. In the second model, the collective ownership of land rights is retained. Using the founded company as an intermediary, land use rights are sublet to third-party companies in exchange for rent. Part of the rent is retained to cover the company's operating expenses, part is used for land leveling and small infrastructure construction costs, and the remainder is returned to the villagers in the form of bonuses. The local government collects land transfer payments and related taxes and fees for management, which are then used for the construction of other infrastructural improvements and facilities.

4.2.3. The Problem

In this mode, some infrastructure construction is undertaken by the joint stakeholding company formed by the land development company and the village collective. Here, a local and regional coordination problem occurs. The government must coordinate the relationship between the stock company and the infrastructure management department. A considerable part of the rights to the collective land remains under collective ownership but is managed by the unified management of the joint stakeholding company. The lack of unified planning and management can lead to significant social and environmental problems. In this model, the land-development company is not identical to

the state-owned land development company. The government must effectively monitor the operations of the land company as well as the distribution of incomes.

4.2.4. Case Analysis: Putuo Xinyang Industrial Zone

Xinyang Industrial Park is a district-level industrial area in the Putuo District. This park was established in 1995, with a total planned area of 187 hectares and 93 hectares of developable land. In 2006, the park was designed by the National Development and Reform Commission as an industrial base for printing and packaging, optoelectronics, and metal products.

In the late 1990s, Zhangxiancun, Hengtangqiao, Xuezhai, Wujiafen, Xuetang, and other villages signed a collective agreement to create a land development committee, now called the Xinyang Development Zone Management Committee. The board worked with financial investors to improve the land. Following that preparatory period, part of the land was auctioned off on the land market, and the other part was rented out. The land use rights of the auctioned land parcels, which were nationalized through transactions, were leased to industrial companies for 30 years. The remaining land rights remain under collective ownership but are rented out for industrial purposes.

Currently, more than 50 major industrial enterprises and more than 800 other registered business entities are located in the Xinyang Industrial Park. The total investment from this locality has reached 300 million yuan, with existing net fixed assets of more than 200 million yuan, producing liquidity of 150 million yuan. The annual value of the industrial output of the park grew from 160 million yuan in 1996 to 4.3 billion yuan in 2009. The rate of land development in 2010 was 82.79%. The Xinyang Industrial Zone is located in the town of Taopu, in Yang, a new village developed by the industry. Because of its location adjacent to the main city of Shanghai while being close to the outer ring, the area has many advantages in terms of transportation. The base of the original business village and storage industry was ideal. In the 1990s, with the industrial land adjustment in Shanghai and several rounds of updating development zones, the new village of Yang was placed near this development.

The village collective construction land remained after some land was transferred to the state. The retained land was designated as collective construction land. Third party companies receive commissions to develop and operate the land. The village committee receives the rent paid by the operating companies, retains part of the funds for management expenses, and returns the remainder in the form of dividends and other benefits to the villagers. In 1995, a development zone was established, and a considerable part of the land was retained under collective ownership. The joint stock company manages the land under the jurisdiction of the Development Zone Administrative Committee, and the land rent income is provided as compensation for Xinyang.

4.3. Mode III: Piloting of Collective Construction Land Transfers

4.3.1. Structure

Due to relative advantages in land resources, farmers and collective economic organizations are increasing their demand dedicated to rural construction. In relation to rural collectives, circulation of construction land is prevalent across the country. Policies and procedures must be developed to guide and audit such transactions. In 1999, the Ministry of Land and Resources developed several pilot projects in Wuhu, Suzhou, Huzhou, Chongqing, and other places. These projects were intended to encourage local or foreign capital to establish various enterprises through land rental, transfer, and other forms of transactions in collective land use rights. Additionally, the government is working to gradually urbanize the farmers living around the borders of urban and rural areas.

In 2010, the city of Shanghai published a policy entitled “Several Opinions on the Rural Collective Construction Land Transfer Pilot Project.” The doctrine “Total Control, Paid Use, Same Land Same Rights, and Protected Rights” indicated that the land use rights of rural collectives for construction could be transferred if the members of the collective economic organization or more than two-thirds of the members at large agreed (Figure 4). Later, the municipal government issued the document “Rural Collective Construction Land Transfer Pilot Operation Norms (Trial),” which contained regulations for land transaction. Five villages (Jiading Xiaomiao, Pudong Yimin, Putong Chunlei, Songjiang Xinzhen, and Jinshan Tingbei) were selected to pilot the project.

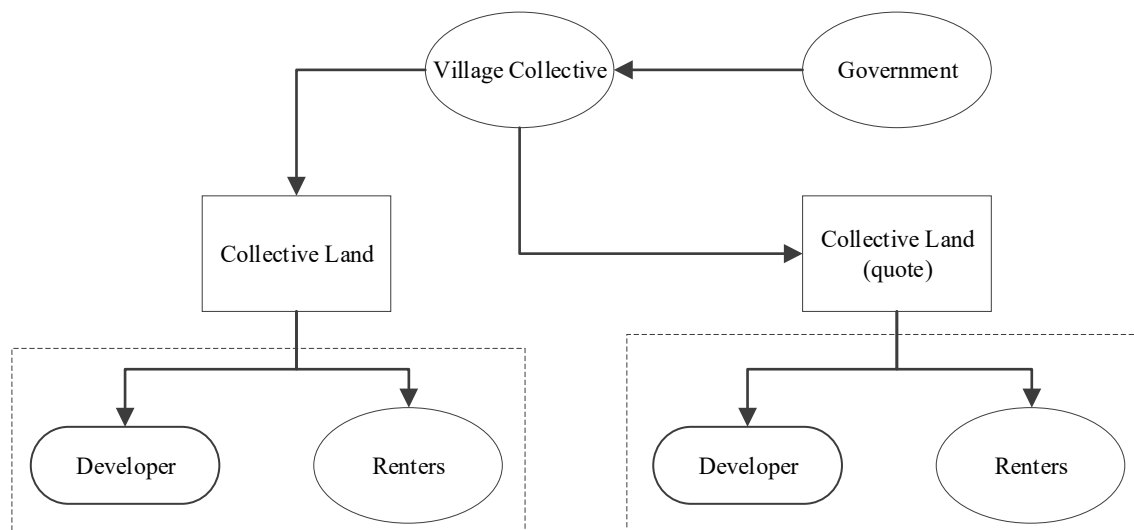


Figure 4. Collective mode of land development.

4.3.2. Operating Mechanisms

The primary entity of this land development mode is the government of the pilot town or township. Proposed developable land remains as construction land for rural collectives, but it must comply with urban and rural planning guidelines and the city’s land use master plan. This land is limited to the following uses: industry, commerce, tourism, services, and other business projects. The land cannot be used for residential purposes. Collective rights to rural land belong to the villagers and must be registered with the local authority.

In accordance with these policies, the local government creates an account for the transfer of income funds from the construction of the land of the rural collective and constructs a financial supervision system for the township. Rural collective economic organizations generate revenue through the rights transfer for the use of the construction land of the rural collective. This revenue is mainly used for infrastructure and the construction of public facilities, the social security of members of the collective economic organizations, development, and production. A certain percentage of the value-added income must be submitted to the government when land appreciation occurs.

To further regulate land use rights transactions in rural construction, the policy established land transfer price references and indicated that the minimum cannot be less than 70% of the pre-defined price. The leased land price is converted according to the corresponding standard. For the legal use of collective construction land, economic organizations in the village must comply with the above mentioned paid use standards, and land users must re-sign their leases or transfer contracts.

4.3.3. The Problem

To regulate the flow of collective construction land, the local government or township must be involved in property rights, planning, and supervision. This results in substantial financial and human resource burdens being placed on local governments. In reality, some villages are demotivated by the policies, and buyers are not confident navigating the new system. Also, the amount of suitable developable land that is in line with the city's urban and land use master plans is insufficient. A series of processes, related to the planning, construction, land and environmental protection, fire safety, and other departments, must be finished before any land transfer, which requires considerable coordination from the local government. Moreover, a key challenge is that no mature program of legal provisions exists for the trading of rural collective construction land. This may create a gray area that could encourage corruption and illegal activities.

4.3.4. Case Analysis: Pudong Yimin

The village of Yimin in the Pudong New District was one of the first to pilot the construction land transfer in a Shanghai rural collective. The pilot research and planning work was started in October 2009. After discussion and public engagement involving two levels of planning management departments in the city and district, the pilot was approved at the end of December 2010. On 19 January 2011, the Shanghai Land Trading Affairs Center issued a notice of the collective transfer of construction land in the village, and the bid was completed on 20 January 2011.

Yimin has 34.8 hectares of collective construction land, accounting for 58.6% of the total construction land in the village. The 35.2 hectares state-owned land is within its boundaries, accounting for 29.2% of the total area of the village. According to the city's urban and land use master plans, Yimin has no remaining land for construction. This means the village must redevelop the construction land that was rented out or used without legal processes. Two problems arose during this process. First, reclaiming used industrial land is difficult. Industry is an essential part of this village's economy, and most industry here functions well. The chemical industry, machinery manufacturing, and other enterprises have invested considerable amounts of money in pre-equipment. Industrial transformation and upgrades are also challenging. Second, villagers are eager to transfer the construction land of their homestead, but this willingness entirely depends on compensation. Third, collective land for construction is scarce in Yimin. Little transferable construction remains. Only a 6.5-hectare piece of developable construction land remains until 2020.

4.4. Mode IV: Piloting of Expropriation of Land Rights and Retention of Land Use Rights

4.4.1. Structure

Expropriation of land rights and retention of land use rights mean that a certain percentage of the collective land is retained for the villagers from the planned expropriation, with the purpose of second- and third-industry development. Through land stake-sharing and land capitalization, stable and long-term return land revenues are ensured.

This mode includes four main stages: First, when expropriating rural collective land, a certain percentage of the land is allocated and left to collective economic organizations for the development of non-agricultural business. Second, 5–10% of the land is allocated to be expropriated to the economic organization of the village collective and site selection and urban planning is complete. Third, following the development of the city's urban and land use master plan, 5% of the agricultural land is allocated to the economic organization of the village collective for use as an industrial park. Lastly, land use for farmers is approved for the development of a long-term project that produces stable income. The revenue should be primarily used to increase the income of farmers and the collective economic organizations for public welfare (Figure 5).

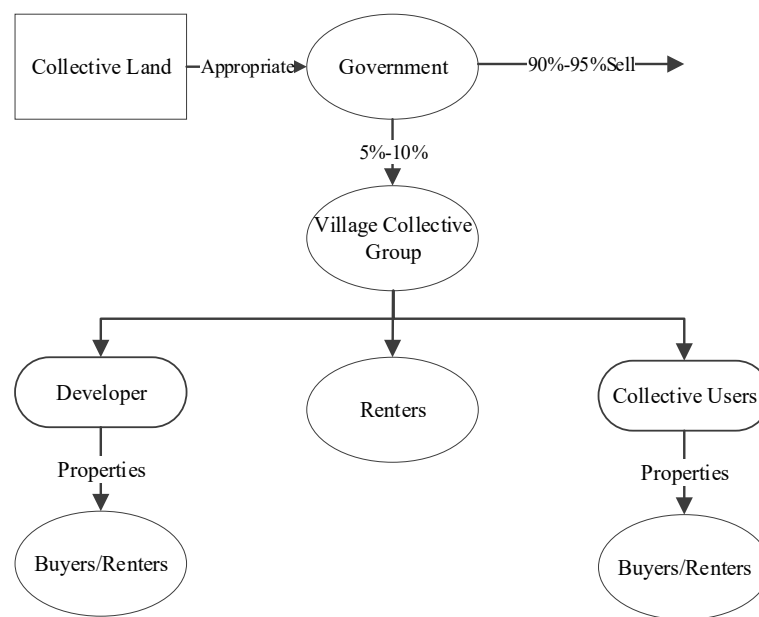


Figure 5. Government appropriation mode of land development.

4.4.2. Operating Mechanism

The expropriation of land rights and land use rights is implemented by the district or county government. The government of the local township and the collective economic organizations of the pilot villages, usually with one or more stake-sharing companies from the villages, complete the land development. During this development, the land rights are signed over to the state, and the land use rights are retained among the economic organizations of the village collective through a formal transaction. The economic organization of the village collective initiates the registration of land use rights according to the laws. The land use rights obtained by the economic organizations of the village collective through the land use rights transfer are owned by the economic organizations of the collective and all of its members.

During land expropriation and the procedures for the transfer of land use rights, land transfer payments are submitted to the central government. The fees generated from the acquisition of land use rights to the village collectives are exempted. The government compensates the economic organization of the village collective for land acquisition, after deducting the paid use fees for the new construction land and other funds. Village-level collective economic organizations raise the funds for the payment of the transfer costs through fundraising, loans, or other means, and they assume the burden of retaining buildings and ancillary facilities, such as industrial plants, shops, roads, and other investment funds. In reality, most projects adopted by the township and town collective joint stakesharing companies raise money through the investments of local farmers. Villagers receive long-term stable returns through property leasing operations and other methods.

4.4.3. The Problem

As the land acquisition and land use retention system is still in the pilot stage, two types of problems have occurred in the system design and practical operations. First, the design of the land acquisition and land use system is inconsistent with current policy. To encourage the implementation of the system and attract investments, local governments usually reduce land transfer costs in consideration of job creation, anticipated tax revenues, and other benefits. However, in the “General Office of the State Council on the Regulation of State-Owned Land use Rights-Transfer Revenue and Expenditure Management Notice” (GUOBANFA, 2006, 100), the state outlines that no region, department, or institution is allowed to reduce land transfer prices through any program or project.

This is a significant challenge for local governments attempting to attract developers in relatively disadvantaged areas. Second, no method of determining the proportion of land expropriation and retention is well established. The 5–10% rate for existing land use is unfair to those villages or towns whose land was expropriated before 2005. Meanwhile, the policy does not consider the village populations or their different states of economic development. Third, the implementation of this policy faces land quota and land inventory challenges. The lack of specific operation methods may result in delays in land retention for village collectives because their needs for land development projects are uncertain. Fourth, for the transfer of land for resettlement, although the mode of holding the land can be used as an asset, the lack of a corresponding mechanism for income distribution inhibits the enthusiasm of the majority of villagers. The lack of policy implementation supervision or financial supervision are likely to lead the government to participate in the distribution of income, which usually generates corruption and a loss of collective assets.

4.4.4. Case Analysis: Hongqiao

Before the institution of the pilot system, some locations like Hongqiao and Qibao, had already begun to break through institutional bottlenecks in the collective ownership of assets. They started to quantify the equity in collective assets to individuals and establish a clear relationship of property rights. In this way, they strengthened the sense of responsibility of the manager and the operator, and built a rural democratic system. After decades of development, Hongqiao became one of the national-level centers and is now competing with major cities such as Suzhou, Hangzhou, and Nanjing as the western economic hub from Shanghai [43]. The pilot policy was then implemented in Hunan, Hangtuo, and Malu. These areas quickly emerged as satellite centers of the city.

5. Conclusions and Policy Recommendations

This study summarized and analyzed the four modes of informal land development activity existing in the urban fringes of Shanghai. These informal modes of land development differ in their methods, processes, and subjects of development, as well as their systems of land tenure, distributions of benefits, and type of government intervention (Table 2).

The four modes were differentiated based on their methods of land acquisition, type of land development, and coordinating entity. Collectives are the primary agent of informal land development. Local and central governments participate in informal land development through the provision of infrastructure, auditing, and equal distribution of income.

The in-depth analysis and case studies provided here indicate that the variety in informal land markets in Shanghai reflect the inherent demands of the market for allocation of land resources. This is within the constraints of the given system and against the given development background. This corresponds with the conclusion in the literature that the complex social, economic, and land use structures result in widely diversified opportunities for various social and economic groups, making the economic activities more vibrant [11,16,21,22,27,44,45]. Instead of illustrating the differences among regional land development modes in the literature [10–13,21], the study identified the variety approaches inside one city boundary. The results show that the simultaneous existence of multiple land development modes within the same city makes Shanghai's urbanization process one of the most dynamic in the country.

From the evaluation form (Table 2), the results show that village collectives are the main agents of informal land development activities. The literature [11–13] demonstrates that villagers who live on the urban fringes can maximize social-economic benefits by mobilizing land use rights and allocating land resources. This process increases land use efficiency significantly by elevating land development to more productive uses. This reduces the major rural-urban social-economic divide in the city.

Table 2. Comparison of different modes of land development.

Category	Selection	Mode I	Mode II	Mode III	Mode IV
Land Source	State-owned				
	Collective-owned	■	■	■	■
Main Agent	Both				
	Government			■	■
	Collective	■	■	■	■
	Developer		■		
Method of Land Acquisition	Others		■		
	Rent	■	■		
	Expropriation			■	
	Transaction				■
Infrastructure	Expropriation retention				
	Government	■	■	■	■
	Collective	■		■	■
	Developer		■		
	Enterprise		■		
Type of Land Development	Other		■		
	Land rental	■	■	■	■
	Property rental	■	■	■	■
	Property	■		■	■
	self-management	■		■	■
	Property transfer			■	■
Holder of Rights To Land	Land use rights transfer			■	■
	State				
	Collective	■		■	■
Coordinating Entity	Both		■		
	Government	■	■	■	■
	Collective	■	■	■	■
	Developer		■		■
	Enterprise		■		
	Farmers	■	■	■	■
	Land or property user	■	■	■	■

Note: ■ indicates the chosen one among items in Selection.

However, conflicts between the mode of the market and the existing institutional constraints reflect the uncoordinated development of the land and the economic and social development around the urban fringe of the major cities. One of the major outputs is the spread out urban village formation, which has turned out to be one of the critical social problems among Chinese cities [16]. This creates a major obstacle to the emerging land market for urban redevelopment [17]. It also suggests the need for further institutional changes, if cities are to achieve a more transparent and equalized system of land development.

The study also found, for the pilot collective land transfer for the construction model, and for systems of land acquisition and land use, that further work is necessary to improve the implementation, standardization, and operational procedures and programs. The functional mechanism of increasing policy and financial support must also be improved. The empirical result of this paper suggests that government administration should improve the land market system, strengthen the planning of control and guidance, rationalize the distribution of interests in land development, and strengthen the supervision of management of land development enterprises.

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