

Models and Implementation Pathways for Meager-Profit Sustainable Renewal of Old Residential Communities

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Abstract

Meager-profit sustainable renewal has become an important approach for attracting social capital into the regeneration of old residential communities in contemporary China. As local experimentation has diversified, a systematic synthesis of the accumulated experience is urgently needed. Starting from a cost-benefit balance perspective, this paper identifies the driving mechanism of meager-profit sustainable renewal and the pathways through which asset value can be activated during the renovation and operation stages. Based on a comparative review of representative cases across China, it summarizes six typical models, clarifies their characteristics, application conditions, and implementation requirements, and provides references for reducing pressure on public finance while motivating the participation of social capital and residents.

Keywords: old residential communities; meager-profit sustainability; implementation pathway; typical model

Renewal of old residential communities is an important urban-regeneration action that safeguards well-being, improves urban quality, and strengthens governance.[1] In July 2020, the State Council's Guiding Opinions on Comprehensively Advancing the Renovation of Old Urban Residential Communities proposed that, during the 14th Five-Year Plan period, China would largely complete the renewal of approximately 219,000 urban residential communities built before the end of 2000. Yet inadequate funding and weak incentives for subsequent operation and maintenance have increasingly constrained implementation. To address the unsustainability of reliance on public finance, cities are exploring new financing pathways involving social capital and resident contributions, together with full-cycle models integrating construction and long-term operation.

Drawing on distinctive practices such as Beijing's Jinsong model,[2] the renewal of Hongyupo in Chongqing,[3] and resident-led regeneration of Zhegong New Village in Hangzhou,[4] this paper analyzes the driving mechanisms and practical experience of meager-profit sustainable renewal. It applies a cost-benefit model to representative projects, compares typical models and their applicable settings, and proposes implementation pathways that can support wider replication.

1 Driving Mechanism: Cost-Benefit Balance

Financial balance is a central issue in urban regeneration,[5] and the balance between costs and benefits is its basic condition. Zhao Yanjing et al.[6] express the general rule as:

$$S = R - C$$

where surplus S equals revenue R minus cost C . A positive surplus indicates that a project can achieve financial balance and generate an incentive for renewal. For the renovation and subsequent operation stages, the relationship can be decomposed as follows:

Upfront renovation stage: $S_0 = R_0 - C_0$, where the subscript 0 denotes one-off variables. (1)

Subsequent operation stage: $S_k = R_k - C_k$, where k denotes recurring variables and $k = 1, 2, 3 \dots n$. (2)

Earlier large-scale demolition and reconstruction emphasized the first equation. Changes in land use, higher development intensity, improved property quality, and changes in tenure generated major one-off gains through asset replacement,[8] as demonstrated by comprehensive redevelopment in Guangzhou's Liede, Yangji, and Pazhou villages.[7] This model depended on urban expansion and strong external demand and was suited to rapid urbanization and population growth.

Under slower urbanization, low or negative population growth, and stock-based development, the external dividends supporting demolition and reconstruction are diminishing. Comprehensive improvement and micro-regeneration have therefore become dominant approaches.[9] Because they rarely generate large one-off land and property gains, renewal must seek profit potential in both the renovation and operation stages. During renovation, spatial resources capable of producing modest value should be carefully identified to maximize one-off surplus S_0 . During operation, projects should create stable, recurring income streams based on local resources and demand, increasing the value and resilience of S_k . Together, these two processes produce both the "meager profit" and its "sustainability."

2 Six Typical Models Based on Comparative Case Analysis

Existing studies have examined market and resident participation,[10] financing optimization,[11] transaction-cost reduction,[12] community-asset identification,[13] and the use of underutilized space,[14] but have generally focused on individual cases. Common mechanisms through which diverse projects achieve cost-benefit balance and sustainable operation have not been systematically compared.

The national case review undertaken here identifies six models across two stages (Figure 1). At the renovation stage, value is activated through spatial expansion, spatial appreciation, or spatial integration. At the operation stage, recurring revenue is generated by providing services to present and future users, including residents, citizens, and visitors.

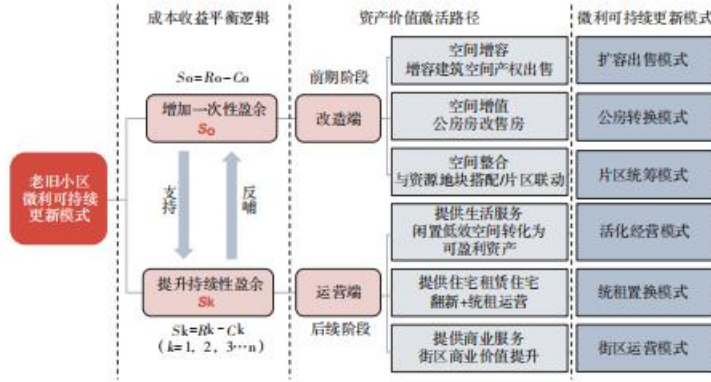


Figure 1. Six typical models of meager-profit sustainable renewal of old residential communities.

2.1 Meager-Profit Models at the Renovation Stage

Spatial expansion increases building area and sells the increment. Spatial appreciation improves property value through refurbishment, upgrading, or tenure conversion, including the sale or leasing of renovated public housing. Spatial integration combines projects or resources across a larger area to achieve financial balance.

2.1.1 Spatial Expansion: The Expansion-and-Sale Model

Many old communities were built to standards that no longer meet contemporary needs. Some buildings are structurally weak, poorly maintained, unsafe, and spatially inefficient. Demolishing and rebuilding clusters or individual unsafe buildings, or adding space to existing buildings, can create additional floor area. Residents repurchase the increment, and the resulting revenue covers renovation costs.

Zhegong New Village in Hangzhou is representative. After approximately forty years of use, several buildings were classified as dangerous. The pilot project launched in late 2023 demolished thirteen buildings, constructed seven mid-rise residential buildings, and renovated one building. Without increasing the number of households, it expanded usable floor area, added a community activity center of approximately 1,500 m², and created more than 460 underground parking spaces. Residents contributed approximately CNY 470 million. Replacement area equivalent to the original floor area was repurchased at cost, incremental area at approximately CNY 34,520/m² - below nearby second-hand housing prices - and parking spaces at approximately CNY 200,000 each. Government subsidies for old-community renewal, elevator installation, and future-community development totaled approximately CNY 60 million.[4] The total renovation cost of approximately CNY 530 million was therefore largely balanced. Parking and property-management revenue subsequently cover annual operating costs with a modest surplus.

The model allows residents to return to the same site and improve housing quality and asset value through limited self-financing, without increasing household numbers or imposing major additional public-service obligations.[6,15] In Zhegong New Village, estimated property values rose from about CNY 35,000/m² to CNY 60,000/m², strengthening residents' willingness to contribute.

Shanghai and Guangzhou have incorporated expansion into policy. Shanghai's 2021 opinions on accelerating renewal of old housing allow structurally suitable non-self-contained workers' housing to add floors or outward extensions where demolition and reconstruction are infeasible. Caoyang No. 1 Village used such an outward-extension approach to add approximately 8 m² of independent kitchen and bathroom space to each dwelling.[16] Guangzhou's draft implementation measures likewise allow owners to finance and act as renewal entities. Building 2 on Jiqun Street in Huadu became the city's first multi-owner, self-financed demolition-and-reconstruction pilot supported by government incentives.[17]



Figure 2. Zhegong New Village before and after renewal and its cost-benefit balance at the renovation and operation stages.

2.1.2 Spatial Appreciation: The Public-Housing Conversion Model

Many pre-2000 communities contain public housing. Although some units were privatized during housing reform, others were not eligible for sale.[18] These remaining public units are often poorly maintained or underused, but their ownership is relatively concentrated, typically in government or work units, making coordinated batch renewal easier. Public housing can therefore serve as a catalyst: after refurbishment and conversion into self-contained units, revenue from sale under housing reform or increased rent can cover renovation of both the units and common areas.

Building 17 in Guangminglou, Dongcheng District, Beijing, was the first pilot for reconstruction of a dangerous and dilapidated directly managed public-housing building in the Core Area of the Capital. The original three-story simple building was replaced by a four-story building with one semi-basement level. Household numbers remained unchanged, each unit received an independent kitchen and bathroom, and average unit area increased by approximately 17 m². Directly managed public housing was converted into resident-owned housing managed with reference to affordable-housing rules.

The project cost CNY 20.38 million. The twenty-nine households chose return plus purchase and contributed CNY 4.60 million. Municipal and district finance contributed CNY 5.83 million, while the district government, as owner, contributed CNY 9.95 million and received ownership of 432 m² of newly added public-service space.[2] The renovation stage achieved balance. During operation, a district state-owned enterprise uses income from the service space and property fees to cover recurring costs.

The model can create a rolling renewal cycle. In Shanghai's Pengsan Community, the project was divided into five stages; housing added in each stage supported relocation and transition in the next, while repurchase of renovated public units achieved tenure consolidation, additional affordable housing, and overall financial balance.[19] In Guangzhou's Huangshi Garden, scattered vacant public units were renovated and leased as more than sixty affordable rental units, enabling a low-investment, incremental development approach.[20]



Figure 3. Building 17 in Guangminglou before and after reconstruction and its two-stage cost-benefit balance.

2.1.3 Spatial Integration: The Area-Coordinated Model

Communities with limited internal value potential may be unable to balance costs at the individual-project scale. Spatial integration can provide balance through two approaches. The first combines low-return community renewal with profitable resource projects in a mixed project package. The second packages several old communities for area-wide renewal, enabling resource sharing and spreading costs.[10]

Heyuan Community in Liwan District, Guangzhou, illustrates the first approach. Located approximately 1.2 km from the former Guangzhou Shipyard site, it was originally worker housing, with some buildings nearly sixty years old. The former shipyard land was acquired by government through the "three-old" redevelopment

program, and the first parcel was sold in 2020. The land-transfer contract required the purchaser to fund, implement, and subsequently operate the CNY 250 million renewal of Heyuan Community. The program included thirty-one measures, such as fire-safety improvement, barrier-free facilities, utility-cable rectification, rainwater-sewage separation, and smart-community systems. The implementing entity continues to operate the new underground parking facility and provides property services.[21]

This pairing of high- and low-return projects allows government and market actors to balance rights and obligations at a broader scale. Shanghai has incorporated mixed project packages into statutory redevelopment units along the Huangpu River, linking public-interest projects such as neighborhood renewal with profitable development parcels.[22] Guangzhou and Chongqing have also encouraged area-wide packaging of multiple communities. Chongqing's Hongyupo program, for example, covers 14.8 ha, eighty-eight buildings, and 126,000 m². A single entity coordinates financing, design, construction, and operation. Shared property management and cleaning services spread costs and resources across communities, enabling the operator to recover investment and earn a profit over approximately ten years.[23]



Figure 4. Heyuan Community before and after renewal and its cost-benefit balance.

2.2 Sustainable Models at the Operation Stage

People-centeredness and fine-grained implementation are central principles of urban regeneration.[24] Operating-stage profitability depends on carefully identifying user demand, activating underused space and locational advantages, and providing paid services. Users include current residents and future users such as tenants, citizens, and visitors. The principal approaches are community and property services, housing rental, and distinctive commercial services.

2.2.1 Everyday Services: The Activated-Operation Model

Many old communities lack adequate property and public services. Idle or inefficient space can be renovated and used for community commerce, everyday services, and parking. Rent and operating income can simultaneously meet resident needs, activate space, and expand commercial revenue.

The renewal of Jinsong North Community in Beijing by Vision Group is a leading example.[25] The company invested CNY 31 million in environmental improvement and obtained a twenty-year, rent-free concession to operate approximately 1,670 m² of existing buildings and 1,000 m² of vacant land.[2] It introduced community retail, property management, and parking. Average annual operating cost is approximately CNY 2.79 million, while annual income is approximately CNY 6.27 million. Estimates suggest that ten years of operation can recover the upfront investment and twenty years can produce an 8% return.[2]

The model fills service gaps and improves the environment while relying on underused internal assets. Resident acceptance is generally high and mobilization relatively easy, but the implementing entity must possess long-term asset-operation and property-management capacity.



Figure 5. Jinsong North Community before and after renewal and its two-stage cost-benefit balance.

2.2.2 Housing Rental: The Master-Lease and Relocation Model

Many old communities occupy well-connected, valuable locations but command low rents because of building depreciation and poor environmental quality. The gap between existing rent and the rent of better-quality housing in comparable locations can support master leasing.[26] Original residents are offered alternative housing or rental subsidies; vacated units are renovated and leased at higher rents to nearby demand groups. Long-term rental income covers community renewal, unit refurbishment, and resident compensation.

Courtyard No. 3 in Zhenwumiao Wuli, Xicheng District, Beijing, is adjacent to the Financial Street business area. Several elderly residents living alone wished to move closer to their children and to housing with elevators and convenient medical access. In 2019, Vision Group and the original property company established a joint-management entity. Twenty households in Building 3 signed ten-year leases. The company found suitable replacement housing, renovated common areas and unit interiors, and leased the upgraded apartments to finance-sector workers. Common-area renewal cost approximately CNY 6 million. Rent paid to owners plus interior refurbishment amounted to roughly CNY 8,000 per unit per month, while renovated units could be leased for approximately CNY 12,000. The project could break even after six years and generate approximately CNY 3 million in profit after ten.[2]

The model better matches original residents to housing that meets their needs while releasing the value of centrally located units. Shanghai has since explored a state-owned-enterprise version. Under the 2023 "leasing plus elderly care" pilot, healthy residents aged 60-75 in fourteen central-city subdistricts may sign five-year bulk leases with a municipal state-owned enterprise. They receive discounted access to affordable rental housing in suburban new towns, while the enterprise renovates their original homes and leases them to new citizens, young people, and skilled workers.[27]



Figure 6. Zhenwumiao Wuli Courtyard No. 3 before and after renewal and its cost-benefit balance.

2.2.3 Commercial Services: The District-Operation Model

Some old communities possess or adjoin distinctive historical, cultural, local-symbolic, or tourism resources. By activating these assets, operators can stimulate demand, improve district attractiveness and commercial value, and reinvest revenue in renewal, operation, and maintenance.

Chengdu's Yulin district introduced a professional planning and operating organization in 2018 to coordinate and brand an area of approximately 1.3 km². The operator master-leased roughly 1,200 shops at key street corners, replaced incompatible or vacant premises with distinctive small businesses, and leased some homes for guesthouse use, extending visitor stays and supporting bars, restaurants, and the night-time economy. Public buildings and spaces were activated and used at different times of day to add community services through small-scale interventions. The Yijie Xiangzili project, for example, converted a parking shed into a shared community room, exhibition space, and café.[28]

The model strengthens district identity, resident attachment, and a positive cycle between commercial operation and community building. Guangzhou's Liuyun Community uses the same entity to manage commercial and residential property, reducing the negative effects of excessive commercialization. Management fees from ground-floor businesses are reinvested in everyday management and environmental improvement, contributing to a distinctive neighborhood cultural brand.[29]



Figure 7. Yulin district before and after renewal and the positive cycle between district commerce and community building.

3 Application Conditions and Implementation Support

Projects should select models according to locational conditions, spatial characteristics, and socioeconomic context. The three renovation-stage models - expansion and sale, public-housing conversion, and area coordination - rely on joint funding by government, residents, and market actors. They often involve larger cash flows but can substantially balance one-off costs through added capacity, tenure conversion, or project packaging, leaving comparatively limited operating pressure. The three operation-stage models - activated operation, master leasing, and district operation - are generally market-led, require smaller upfront cash flows, and avoid large-scale demolition or asset transactions. Their balance depends on refined, high-quality, continuing operation and therefore on strong long-term asset-management capacity.

3.1 Applicable Conditions

Table 1. Comparison of the six models

模式	空间更新范式	微利资源	盈利方式	适用情形
扩容出售模式		容量较低的危旧住宅, 建筑间距较大, 建筑结构良好的住房	拆除重建、贴扩建、改扩建后, 增容空间出售	小区内存在集中成片或整栋建筑质量较差的危旧房屋, 或者是建筑间距较大、建筑结构较好的多层住宅的情况
公房转换模式		集中或分散分布的政府直管公房或单位自管公房	公房改造后出售或出租	政府直管公房或单位自管公房比例较高, 居民房改意愿明确并且具有相应支付能力的老旧小区
片区统筹模式		可以产生经济利润的资源地块, 或成片老旧小区	①与资源地块形成“肥瘦搭配”项目包形成收益平衡; ②与周边小区“取长补短”形成资源互补	自身资源较为匮乏, 难以实现成本收益平衡但周边具有净地开发等增值收益空间较大项目, 或周边老旧小区集中成片可资源互补的老旧小区
活化经营模式		闲置或低效的场地、建筑	改造后提供公共服务和商业服务获得持续收益	规模较大, 内部闲置或低效的场地或用房资源较多, 社区生活服务等功能相对缺乏的老旧小区
统租置换模式		良好的区位优势, 旺盛的租赁需求, 一定比例的闲置住宅	统一租赁获得持续租金收益	区位优势突出, 周边租赁需求旺盛, 与周边片区存在较大租金差的老旧小区
街区运营模式		小区自身或周边的商业、文旅资源	挖掘文旅资源, 提升商业价值, 盈利反哺老旧小区改造	小区自身具有较强的文化资源本底, 或小区邻近城市商业文化中心、历史文化街区、旅游景点等

The expansion-and-sale model is suited to clusters or whole buildings in poor condition, or to structurally sound multi-story housing with sufficient spacing for additions. Public-housing conversion is suited to communities with a high share of directly managed or work-unit public housing, clear resident willingness to

purchase, and adequate payment capacity. Area coordination is appropriate where internal resources are insufficient but nearby development parcels have substantial value, or where clustered old communities can share complementary resources.

Activated operation is appropriate for large communities with substantial idle or inefficient sites and buildings and deficient everyday services. Master leasing is appropriate for communities with strong locational advantages, high surrounding rental demand, and a substantial rent gap. District operation is appropriate where the community has strong cultural resources or lies near a commercial-cultural center, historic district, or visitor attraction.

Table 2. Summary of application conditions

Model	Key resource	Renewal method	Suitable context
Expansion and sale	Low-density or underused building capacity	Demolition and reconstruction, outward extension, or alteration and extension	Dangerous housing or structurally sound housing with expansion potential
Public-housing conversion	Concentrated or scattered public housing	Improvement, self-contained conversion, sale, or lease	High public-housing share and resident capacity to purchase
Area coordination	Profitable parcels or clustered communities	Mixed project package or area-wide renewal	Weak internal balance but strong surrounding value or complementary resources
Activated operation	Idle sites and inefficient buildings	Convert to service, retail, or parking uses	Large service-deficient communities with reusable space
Master lease and relocation	Locational advantage and rent differential	Resident relocation, refurbishment, unified leasing	Strong central rental demand and significant rent gap
District operation	Cultural, commercial, or tourism resources	Coordinated commerce and public-space operation	Communities with distinctive culture or adjacent visitor/commercial resources

3.2 Implementation Pathways and Policy Support

Successful cases remain difficult to replicate because many rely on project-specific negotiation. Policy should address institutional barriers in both renovation and operation (Figure 8).

Expansion and sale require moderate flexibility in planning controls, including capacity, density, and building-spacing standards. Public-housing conversion requires clear pathways for consolidating, selling, or leasing public-housing rights. Area-coordinated projects require transparent rules for defining project packages and renewal areas and for combining approval, financing, and implementation arrangements.

Activated-operation projects should grant implementing entities coordinated rights to use, operate, and receive income from activated assets. Procedures for functional conversion and real-estate registration should be simplified so that long-term operation is legally secure. Master-leasing programs should inventory available housing, balance resident needs with market viability, and strengthen incentives for owners to participate. District-operation projects require simplified approval of functional conversion, together with clear requirements that operators can integrate spatial resources, cultivate suitable businesses, and return long-term benefits to the community.

Table 3. Main institutional barriers and policy directions

Model	Main barrier	Policy direction
Expansion and sale	Unclear approval standards for added floor area and increased floor-area ratio	Permit calibrated planning-control flexibility
Public-housing conversion	Unclear pathways for tenure consolidation, leasing, and sale	Establish explicit tenure-conversion rules
Area coordination	Unclear boundaries and selection rules for bundled projects	Create statutory mechanisms for spatial-resource coordination
Activated operation	Unclear approvals and operating licenses after functional change	Authorize concessions and simplify use conversion
Master lease and relocation	Difficulty obtaining owner authorization for long-term renovation and leasing	Clarify operator authorization and resident safeguards
District operation	Complex change-of-use approval and weak control over business mix	Simplify approvals and establish coordinated operation standards

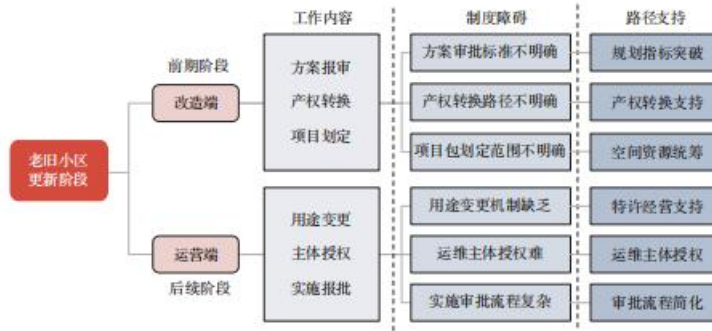


Figure 8. Institutional barriers and policy-support pathways for meager-profit sustainable renewal.

4 Conclusion

On the basis of the cost-benefit mechanism and value orientation of meager-profit sustainability, this paper identifies six typical models and specifies their application settings and policy requirements. The framework provides a basis for diagnosing project conditions and selecting strategies. In practice, projects may combine several models or develop new variants.

Future renewal should begin with an in-depth assessment of internal assets, external resources, and potential demand. Suitable models should then be selected by matching local conditions to the application framework. Projects must also anticipate implementation bottlenecks and establish interdepartmental coordination and policy solutions in advance. Through this process, the market-oriented and sustainable mechanisms required for old-community renewal can be progressively established and improved.

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Notes

1. The policy documents reviewed include Guangzhou's notice on the sale of existing public housing (2018), Shanghai's measures for comprehensive renewal of old housing (2020), the Shanghai Measures for Development and Construction along Both Banks of the Huangpu River, the Guangzhou Work Plan for Old Residential Community Renewal (2021), the Shanghai Urban Renewal Regulations (2021), the Beijing Urban Renewal Regulations (2022), Beijing's opinions on introducing social capital into old-community renewal (2021), Chengdu's measures for stabilizing growth in the housing and construction sector (2022), Guangzhou's measures for activation and reuse of existing buildings in old communities (2023), Guangzhou's pilot measures for introducing social capital into old-community renewal (2023), and Guangzhou's trial measures for renewal of dangerous and dilapidated urban housing (2024).

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