Approach to Value Enhancement Through Capital Synergy in the Urban Regeneration Field

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Abstract

Urban regeneration requires a systematic pathway for value enhancement that integrates economic efficiency, social benefits, and co-creation of composite value. Taking the regeneration of the Eastern Historic District of Changning, Shanghai, as an empirical case, this paper describes and explains the process and mechanism of capital entry, capital synergy, and value enhancement in the urban regeneration field. Drawing on field theory, it constructs a multidimensional capital model that includes economic, institutional, social, innovation, and symbolic capital, and focuses on how multidimensional capital synergy produces value enhancement in urban regeneration. The study finds that the pathway operates as follows: economic capital serves as the foundation, institutional capital provides regulation, and different forms of capital accumulate, exchange, and transmit value through field practice, enabling reproduction; social and innovation capital act as mediators, while symbolic capital provides the orientation. Within the urban regeneration field, the hierarchical relationship among multiple forms of capital takes a quasi-pyramidal form. Through the upgrading of capital synergy, capital gains legitimacy, generates productive forces such as premium effects and resource attraction, and then feeds back into different forms of capital, forming a sustainable closed loop of value enhancement. This process corresponds to the core metaphor of Bourdieu's capital theory, "social alchemy"; this paper conceptualizes its spatial operation as "spatial alchemy."

Keywords

urban regeneration; capital synergy; value enhancement; Changning historic district; spatial alchemy

Introduction

Urban regeneration has become an important action platform for Chinese cities shifting toward high-quality development. Yet both theoretical understanding and practical operation still lack a clear logic chain and a sustainable action path [1].

On the one hand, under the dual impetus of national policy incentives and local development demands, urban regeneration actions in many places have recently shown a pattern of numerous projects, large investments, and rapid implementation [2]. This reflects an active response to strategic opportunities, but without rigorous demonstration and fiscal discipline, it may easily lead to rising local-government debt and pose severe tests for sustainable urban development [2-3]. From 2017 to 2025, the Ministry of Finance reported 57 typical accountability cases involving illegal local-government financing and hidden debt. Some involved urban regeneration, such as Chengdu's use of state-owned enterprises to advance land acquisition, demolition, and resettlement costs for urban regeneration projects, adding RMB 37.164 billion in hidden debt, and Xiamen's use of state-owned enterprises to advance land primary development costs involving seven urban regeneration projects, adding RMB 68.396 billion in hidden debt [4]. Against the continuing accumulation of local debt risk, a regeneration model dominated by government investment is fundamentally unsustainable.

On the other hand, market-driven regeneration aimed at economic value appreciation is often accompanied by the loss of social and contextual value [5]. Phenomena such as people leaving while buildings remain, or historic buildings being relocated, are common [6]. Regenerated spaces may thus fall into controversy over excessive alienation, gentrification, and homogenization. For example, a super high-rise project in the historic core of Chaotianmen, Chongqing, triggered broad negative coverage because of conflicts between capital interests and collective memory. Such cases reveal a deeper contradiction in urban regeneration: the compression of everyday functions by the production of space and the erosion of community networks by capital logic. Since capital fundamentally seeks its own accumulation, one-way value creation led by a single form of capital often causes structural imbalance in urban regeneration. The field urgently needs a systematic pathway of capital synergy and value enhancement that can integrate economic efficiency, social benefits, and composite value co-creation.

On this basis, this study introduces field theory as its core analytical perspective. The theory offers an interpretive framework for understanding the competitive and cooperative relations among multiple actors around specific social spaces. Through this lens, the paper examines the interaction, conversion, and synergy of multiple forms of capital in urban regeneration practice, with the aim of revealing the internal logic of value enhancement.

The empirical case is the urban regeneration of the Eastern Historic District of Changning, Shanghai. The regeneration of Changning's historic district, represented by Yuyuan Road, has maintained high commercial vitality and sustained social attention. It is a classic successful case of integrated historic-district regeneration. Its importance lies in four features: it is a low-cost, low-debt, and low-risk district-wide regeneration case; it is a commercial case that has operated for a decade and conforms to market logic; it involved very limited relocation; and its community context was preserved almost intact. Existing studies have examined the "internet-famous" phenomenon and spatial production mechanism of Yuyuan Road [7-8]. However, neither the production mechanism of gentrification nor the logic of online popularity fully explains its long-term operation. The traditional traffic-monetization model cannot generate value feedback or self-operation [9], and shifts in consumer attention may undermine traffic effects. Behind the more durable vitality shown by this case over ten years lies a value-production logic that warrants further study.

1 Field Theory and Its Applicability

1.1 Origins of Field Theory

Field theory originated in physics. In the 1970s, the French sociologist Pierre Bourdieu introduced it into sociology, where it became an important paradigm in contemporary social-science research. Bourdieu regarded the field as a relational space in which actors conduct practice according to habitus and through the use of capital. Different actors occupy different positions by virtue of different forms of capital and interact to pursue their own aims [10-11]. This proposition breaks with static analytical frameworks and views social space as a dynamic field filled with struggles over power.

1.2 Carriers of Field Practice: Actors and Strategic Practice

Actors are the implementers of practice. Bourdieu criticized structuralism for simplifying society into an objective system of rules and for overemphasizing institutional structures. He argued that only because actors exist do actions, history, and the maintenance or transformation of structures exist [11]. Actors in a field have a distinctive theoretical position. Their strategic practices are always situated within the dialectical relationship between structural constraint and subjective agency [12], and ultimately become practical wisdom combining intuitive judgment and strategic calculation [13].

1.3 Motives of Field Practice: Possession and Conversion of Multiple Forms of Capital

Bourdieu summarized the practical materials accumulated through actors' labor in a field as "capital" [12]. Capital is cumulative, as in intergenerational transmission, and exclusive, as in privilege or barriers. It enables its holders to exchange resources through objectified forms such as money and real estate, or to exert influence through more implicit forms such as social networks and symbolic value [13].

To explain practical behavior through capital, Bourdieu defined all practical action aimed at value production as broadly economic action. He then introduced all forms of capital into the social world and divided them into four forms: economic capital, cultural capital, social capital, and symbolic capital [14]. Economic capital provides the substantive foundation for all other forms, while the other three retain irreducible specificity in the field [13].

Capital conversion is a strategic practice through which actors seek capital appreciation. By changing the form of capital, actors can overcome the value limits of a single capital type. It is therefore more efficient than direct capital accumulation. Economic capital provides the basic condition for conversion among different forms of capital [12,14].

1.4 Applicability and Localized Adaptation of Field Theory

Field theory offers a powerful dynamic framework for explaining the internal tension between strategic practice and institutional stability. In China's urban regeneration, this tension appears as a continuous struggle over the redistribution of spatial rights and interests [15]. Urban regeneration can therefore be understood as a typical field of struggle, in which multiple actors engage in strategic contestation around spatial interests.

However, Bourdieu's theory is rooted in the social transformation of post-war France. His fourfold classification of capital has historical contingency and cannot be directly applied to the complex realities of contemporary China in transition. Two adjustments are especially important. First, Chinese urban governance follows a distinctive logic of administrative leadership plus market operation, so the core role of institutional capital must be emphasized. Second, under digitalization, emerging actors such as science and technology enterprises differ from traditional actors in behavioral routines and value systems. This reshapes the relational structure and power allocation within the field [16], making it necessary to recognize new forms of capital. The dual shaping of the field by China's institutional context and technological transformation creates a need to localize and extend the analysis of capital forms.

2 Reinterpreting Urban Regeneration Practice from the Perspective of Field Theory

The "urban regeneration field" and interpretive framework defined in this study are rooted in contextual reflection on practice. The aim is to propose a localized and systematic pathway for value enhancement oriented by capital synergy.

2.1 Defining the Urban Regeneration Field

In urban regeneration actions, multiple actors reconstruct urban physical space and form a relational space in which multiple forms of capital compete and cooperate. This study defines such a relational space as the urban regeneration field.

2.2 Actors in the Urban Regeneration Field

This study focuses mainly on active forces that continuously operate in the urban regeneration field. The framework includes four categories of actors: local government, implementation entities, local residents, and industrial actors, represented in this case by science and technology enterprises.① Actors obtain entry qualifications by virtue of the capital they hold. In the urban regeneration field, they exchange and transmit capital, realize reproduction, and obtain direct benefits or potential returns. Actors and capital types are linked by complex cross-holdings. To analyze the main line of capital synergy, the following sections focus on the interaction between the four actor categories and their core forms of capital.

2.3 Capital Types in the Urban Regeneration Field

China's urban regeneration field has distinctive attributes, including deep institutional embeddedness and strong industrial orientation. Grounded in practice, and through a generalization of common power-operation logics in the field, this study constructs a five-dimensional capital framework. It includes four initial forms of capital - economic, institutional, social, and innovation capital - and a fifth special form, symbolic capital, which serves as the final orientation. The framework continues Bourdieu's classic definitions of economic, social, and symbolic capital, while adding institutional capital and innovation capital as localized extensions. Innovation capital is not necessarily active in every practical case, but this does not weaken its structural position in the theory. Capital forms are always dynamically co-constructed with social practice. As emerging industries develop, more new capital types may appear and occupy structural positions in the urban regeneration field.

The meanings of these forms of capital and their mechanisms in urban regeneration are as follows.

2.3.1 Economic Capital

Economic capital takes the form of money and material property and is a direct economic resource [12]. Its definition emphasizes materiality, distinguishing it fundamentally from intangible forms such as institutional, social, and innovation capital. In this paper, economic capital refers specifically to material elements directly participating in the production cycle of urban regeneration and measurable in monetary terms. Its core forms include land and buildings as spatial carriers, infrastructure supporting operation, and monetary capital as a means of circulation. Economic capital provides the material momentum and resource base for urban regeneration. Its core role is to start the capital cycle through productive investment and to drive accumulation.

2.3.2 Institutional Capital

Institutions are human-made rules. Institutional capital participates in the production process with institutions as input factors, so owners of institutional resources may obtain opportunities for profit sharing [17]. In the urban regeneration field, institutional capital includes not only formal rules such as policies and plans, but also informal rules in ambiguous areas of discretion. At a deeper level, it includes the meta-rules for rule-making. As a rule-supply system, institutional capital lowers transaction costs by adjusting or reconstructing incentive and constraint mechanisms, provides stable expectations for actors, balances public interest and commercial development, and protects the rights and interests of vulnerable groups.

2.3.3 Social Capital

Social capital refers to the sum of actual and potential resources that actors obtain through their identities and positions in social networks [14]. Membership works as a credential, allowing actors to gain credit and support in both material and symbolic senses [13]. In addition to internal social ties and trust within a group, the structure of a group may also facilitate collective action and create resources

[18]. In urban regeneration, social capital functions as the adhesive of relational networks. Through participatory planning, it helps address conflicts in social-resource redistribution, forms mechanisms of joint construction and sharing, and strengthens cultural identity and community resilience.

2.3.4 Innovation Capital

This paper defines innovation capital as a potential system that starts from the production of new knowledge and is oriented toward the marketization and socialization of that knowledge. It covers the full capacity from basic research and applied development to transformation of achievements. Its core carriers include R&D outputs, intellectual property, proprietary technologies, highly skilled human capital, and data assets [19]. In the urban regeneration field, innovation capital is valuable because of its creative tension in breaking path dependence. By introducing new technologies and new business forms, it drives industrial upgrading, forces adaptive institutional adjustment, and reshapes the field's social networks and cultural atmosphere. Innovation capital is a future-oriented potential whose value is not yet fully determined. Once its potential is successfully verified by the market and monetized, its value settles and converts into economic capital.

2.3.5 Symbolic Capital

Symbolic capital is a special form of capital. It can be understood as a claim to legitimacy related to recognition, obedience, and loyalty [13]. Symbolic capital is rooted in other forms of capital. The process by which other forms are converted into symbolic capital is the process through which capital is recognized and acknowledged; in essence, it is the legitimization and legalization of capital [12]. In urban regeneration, symbolic capital may appear as awards, official designations, social recognition, and similar forms. Practices that appear not to pursue material interests directly often aim to obtain symbolic capital. By constructing an appearance of disinterestedness, they transform latent relations of domination into widely accepted, even actively embraced, symbols of legitimacy [13], thereby providing more durable and deeper support for capital accumulation.

These capital types are not static or isolated. Through actors' strategic practices, they form a dynamic network of mutual conversion and mutual reinforcement: the urban regeneration field. The first four forms are initial capital that actors hold when entering the field. Symbolic capital is not preheld; it is generated from the conversion of initial capital in field practice.

2.4 Capital Hierarchy in the Urban Regeneration Field

Although field theory establishes the foundational position of economic capital, the relational structure among different forms of capital still needs to be clarified.

In the urban regeneration field, institutional capital and economic capital are generally present. They determine the underlying rules and material conditions for allocating social resources, establish the systemic framework for urban spatial development, and represent foundational and stable capital forms in urban regeneration. This paper summarizes them as structural capital. Social capital, innovation capital, and other possible emerging capital types are more adjustable and replaceable. Their specific forms and combinations depend heavily on case context. They provide transformative momentum for breaking existing structural constraints and are the entry points for creating urban space. Because they function as catalysts and adapt to situations, this paper summarizes them as catalytic capital.

Further, with structural capital as the base and catalytic capital as the medium, the positional relationship among multiple forms of capital takes a quasi-pyramidal hierarchy, ultimately pointing to symbolic capital at the value apex (Figure 1). Economic capital, as the most material and substantive form, constitutes the fundamental base of the whole system [14] and undertakes basic functions of resource allocation and material spatial production. Institutional capital, as a regulatory framework, sits above economic capital and provides rules for the allocation and use of core resources. Together they establish the material and institutional foundation of regeneration. Above the structural-capital layer, social capital, innovation capital, and other emerging forms of capital together form catalytic media. Through cultural representation, they redefine latent value systems within structural capital and promote dynamic conversion and value upgrading. Finally, the system points toward value realization in the form of symbolic capital, whose essence is the acquisition of broad legitimacy.

2.5 The Pathway of Capital Synergy-Oriented Value Enhancement: Spatial Alchemy

In the urban regeneration field, various forms of capital follow the pyramidal hierarchy described above. Through continuous conversion and interaction, they form a cyclical evolutionary pathway consisting of capital synergy and value enhancement (Figure 1).

Capital synergy, the upward path, means that various initial forms of capital upgrade and condense into symbolic capital through strategic conversion and interaction, deriving productive forces such as premium effects and resource attraction.

Value enhancement, the downward path, means that symbolic capital further nourishes different forms of initial capital through feedback mechanisms and promotes their value reproduction.

This upward-and-downward cycle constitutes a complete cycle of capital reproduction. It not only drives continuous enhancement of multiple values, but also enables the urban regeneration field to evolve into a sustainable closed loop with self-reinforcing capacity.

This paper proposes the concept of spatial alchemy to describe the pathway through which capital synergy drives value enhancement in the urban regeneration field. The concept derives from the core metaphor in Bourdieu's capital theory, social alchemy, which refers to the social mechanism by which specific forms of economic, cultural, and social capital are converted into legitimate and authoritative symbolic capital, thereby obscuring the historical and conflictual roots of their production and consolidating the existing social order [20]. While inheriting this critical awareness, the concept of spatial alchemy proposed here aims to construct an explanatory analytical framework. From a neutral and process-oriented perspective, it explains the pathway and internal logic through which capital synergy promotes value enhancement in urban regeneration.

The word "spatial" has a double meaning: the relational space composed of social relations in field theory and the physical space that serves as the material carrier in urban regeneration practice. It therefore focuses Bourdieu's capital theory on the production of space. Within the urban regeneration field, all capital synergy and value enhancement occur in this double space and ultimately manifest in the form and function of physical space.

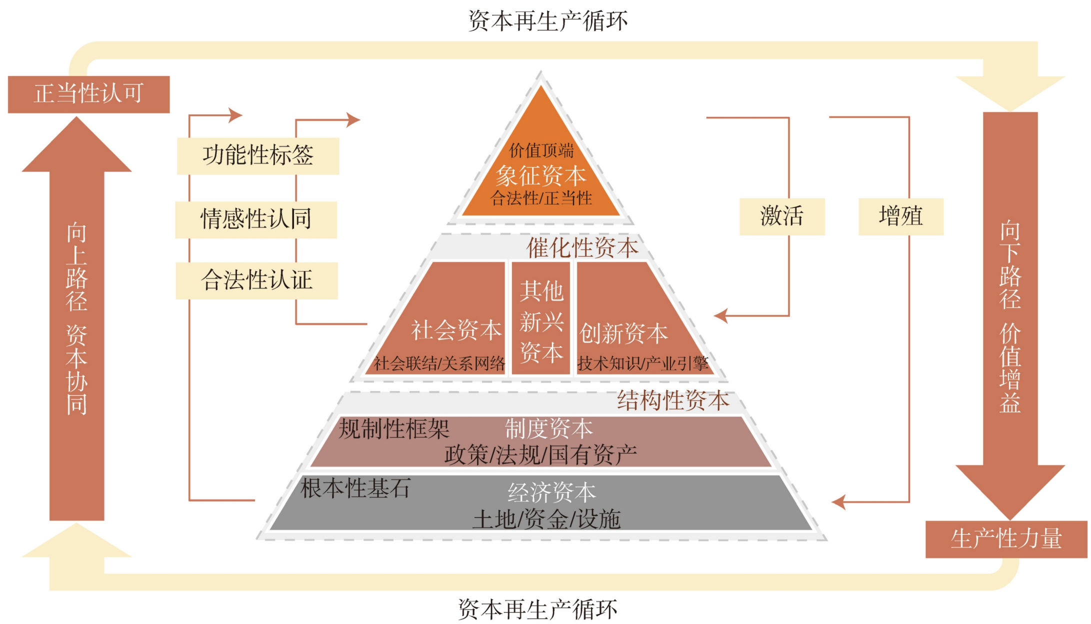

Figure 1. Capital hierarchy and synergetic value-creation pathways in the urban regeneration field.

3 Capital Synergy-Oriented Value Enhancement: Evidence from Historic-District Regeneration in Changning

Over more than a decade of urban regeneration from 2014 to 2025, the Eastern Historic District of Changning underwent a gradual process from points to lines and from lines to areas. The case is a classic example of integrated historic-district regeneration for four reasons. First, the ten-year regeneration cycle fully shows the iterative process of capital and a clear synergy pathway among multiple forms of capital. Second, multiple values were enhanced together, producing projects oriented toward commerce, livelihood, industry, and other values. Third, the case avoided fiscal path dependence by achieving successful district-wide operation with low cost and low debt.② Fourth, it involved very limited relocation, preserved the community context almost intact, and largely crossed the gentrification trap.③

The empirical study is based on the authors' five years of continuous practical engagement as local practitioners. Their work covered key processes including project mobilization, advancement, acceptance, and subsidies. This ensures that the firsthand materials directly derive from the front line of regeneration practice and are cross-checked with public government data.

3.1 Regeneration Process: From Yuyuan Road to the Silicon Alley District

Regeneration of Changning's historic district began during the 12th Five-Year Plan period. At the end of 2014, the regeneration of Yuyuan Road was launched as the first regenerated block in the Eastern Historic District. During the 13th Five-Year Plan period, Changning formally established an overall strategy and coordinated plan for historic-district regeneration, structured around four roads: Yuyuan Road, Wuyi Road, Panyu Road, and Xinhua Road. The earlier regeneration of Yuyuan Road and Wuyi Road has entered a deepening stage in recent years and has gradually driven the integrated development of the northern part of the historic district. During the 14th Five-Year Plan period, as urban regeneration advanced, the historic district attracted more science and technology enterprises. In 2022, jointly promoted by government and enterprises, the Shanghai Silicon Alley science-and-technology innovation district was successfully declared and its pilot construction area was implemented. District regeneration thus moved further toward the deep integration of industrial renewal and urban regeneration (Figure 2).

Figure 2. Comprehensive urban regeneration framework of the Eastern Historic Area in Changning District.

3.2 Capital Entry: Differentiated Pathways of Actor Empowerment

In the urban regeneration field, different actors obtain entry qualifications through the capital they hold and then carry out strategic practice. This section analyzes how the four forms of initial capital enter and empower the field through their main holders. The mechanism of symbolic capital is discussed later.

3.2.1 Institutional Regulation: Rule Empowerment and Continued Investment by Local Government

Local government participates in urban regeneration throughout the process through the institutional capital it holds. From the beginning, municipal and district governments have continuously exercised regulatory guidance, making sustained efforts to optimize resource allocation, reduce transaction costs, guide development sequences, and control strategic directions.

Institutional capital can be divided into two types by input mode and intensity. The first consists of one-off directional decisions bundled with large amounts of economic capital, including asset integration, land reserve, infrastructure construction, and enterprise establishment. Such inputs usually occur in the early stage of regeneration. At the beginning of Yuyuan Road regeneration, the primary tasks were land reserve at important sites and integration of the use rights of state-owned commercial properties [7]. The subsequent integrated regeneration of Wuyi Road also integrated state-owned commercial-property use rights along the route and used five state-owned asset parks as the foundation for the overall Wuyi Road regeneration pattern [21]. In addition, institutional capital coordinated a series of public investment decisions for district regeneration, including demolition of illegal construction, undergrounding of overhead cables, and other environmental governance and improvement works [22].

The second type consists of continuous and refined rule inputs, including the issuance and refinement of policies and plans and small annual subsidies. As time passed and regeneration effects gradually emerged, local government moved behind the scenes, but the input of institutional capital continued to accumulate: designating specialized government agencies for coordination; formulating special-fund policies to subsidize and encourage regeneration projects; exploring innovative urban regeneration paths and supporting transitional changes in building use for key spatial carriers; and strengthening government coordination to help implementation entities obtain municipal state-owned assets across administrative levels.

3.2.2 Economic Aggregation: Resource Integration and Interactive Transmission by Implementation Entities

Economic capital also runs through the whole process of district regeneration. Various implementation entities invested substantial economic capital in obtaining spatial-carrier use rights, optimizing building space, and operating business formats. According to relevant statistics, over eight years of district-level regeneration subsidies, the total construction and installation cost of historic-district regeneration projects exceeded RMB 2.5 billion, with individual project investment ranging from around one million yuan to several hundred million yuan.

Economic capital in this case shows an interesting feature: frequent interaction and transmission with other capital types. In Changning, Creater, as the most active holder of economic capital, first established a cooperative relationship with institutional capital, namely local government, and obtained state-owned housing assets on Yuyuan Road. It then established the social organization Community Refresh to strengthen ties with social capital. It further sought integration with innovation capital, represented by two institutes of the Chinese Academy of Sciences, and founded Xinwei Smart Valley to focus on customized regeneration for science and technology enterprises. Later it established the Silicon Alley Incubator Company to develop university-institute-enterprise cooperation in technology transfer, industrial incubation, and talent cultivation. In spatial-carrier acquisition, land-use preferences, fiscal subsidies, and other aspects, it leveraged more institutional capital and jointly promoted regional industrial renewal. Correspondingly, as economic capital was transmitted, the project types of regional regeneration gradually shifted from an early focus on commercial projects toward balanced development among commercial, livelihood-oriented, and industrial projects.

3.2.3 Social Adhesion: Local Residents' Silent Presence and Co-construction Participation

The Eastern Historic District of Changning adopted gradual regeneration focused on key spatial sites and mainly anchored in state-owned assets, with very limited relocation. Residential communities, local context, and social networks were therefore preserved. Local residents and their stock of social capital remained present in the field from beginning to end.

Social capital in the field followed a three-stage trajectory of silent presence, defense, and co-construction. In the initial stage, it showed a silent presence clearly different from institutional and economic capital. Regeneration actions generally occurred in spaces accessible to residents but with low property-rights relevance, such as state-owned shops and affiliated green space. As regeneration penetrated more deeply into everyday life, local residents used defensive alliances to compete for discourse power. Through lane deliberation councils, citizen hotlines, online opinion, and other channels, they raised issues around facade renovation, storefront-sign removal, parking encroachment, and other disputes. This pressured the formation of community conventions, such as agreements on commerce-residence coexistence and visitor photography, which clarified behavioral boundaries for multiple actors. During this process, the density of residents' relational networks increased, social ties strengthened, and social capital achieved its first transformation from stock to increment. Further, under the joint catalysis of normalized district activities, platform carriers, and NGO groups, community boundaries were permeably reconstructed. Local residents, street-facing merchants, district enthusiasts, and social organizations formed a district community [7]. Co-construction participation expanded the boundary of social capital and further reproduced relational networks.

3.2.4 Innovation Embedding: Spatial Adaptation and Active Integration of Science and Technology Enterprises

The renewed historic district again attracted the attention and entry of science and technology enterprises. In this case, such enterprises entered the field in the middle and later stages of regeneration and immediately used their innovation capital as leverage to attract resources.④

The urban regeneration field and innovation industries have a mutual selection mechanism. Innovation capital can enter the urban regeneration field only when multilayered spatial adaptation conditions are met. The core is to overcome the structural contradiction between innovation-space demand and historic-district constraints and to build a sustainable embedding path. Changning established a three-dimensional adaptation path of carrier, institution, and culture, enabling technological elements to integrate gradually into the urban regeneration field. In carrier adaptation, differentiated demands from start-up teams, growth enterprises, and technology-service institutions were addressed through customized incubation-acceleration spaces and supporting services, with a full-cycle cultivation system supporting enterprises from seed stage to growth stage. In institutional adaptation, innovation capital demonstrated the great value of technology transfer and triggered policy supplies such as planning-capacity adjustment, use adjustment, rent-free periods, and special subsidies [22]. While reducing carrier-use and R&D costs for itself, it also became transformative momentum for flexible breakthroughs in the urban regeneration field. In cultural adaptation, science and technology enterprises actively sought community recognition through science exhibitions, innovation competitions, and similar activities, building emotional ties with local residents. These practices strengthened local trust networks and reduced the contractual cost of innovation cooperation.

3.3 Capital Synergy: The Formation Mechanism of Symbolic Capital

Spatial alchemy begins with continuous conversion among initial forms of capital in field practice. Through changes in attribute, capital breaks through value limits and points toward the generation of symbolic capital. Based on the Changning case, this study extracts a bidirectional matrix of capital conversion (Table 1). The following sections explain how different forms of capital convert into one another and what forms of symbolic capital are generated.

For analytical clarity, the paper divides symbolic capital into three attributes according to mode of operation and channel of acquisition. Legitimacy certification refers to symbolic capital that conforms to dominant field rules or institutions and is recognized by power institutions; its key feature is endorsement by authority. Emotional recognition refers to symbolic capital that can stimulate shared emotions, cultural memory, or value resonance among specific groups and thereby gain collective acceptance; its key feature is collective affect. Functional labels refer to symbolic capital that is regarded as an attractive sign or brand for resource allocation because of observable practical utility or market value; its key feature is resource-attraction capacity.

Table 1. Bidirectional Matrix of Initial Capital Conversion in the Urban Regeneration Field

Before conversion	Economic capital	Institutional capital	Social capital	Innovation capital
Economic capital	-	Investment leveraging policy; government-enterprise cooperation platform	Public-interest platform operation; creation of interaction spaces	Customized carrier development; angel investment
Institutional capital	Property-right transfer; fiscal subsidies	-	Participatory governance mechanism	Government funding support; innovation-cost control
Social capital	Commercialization of local cultural IP	Collective action forcing rule adjustment	-	Informal knowledge network
Innovation capital	Transformation of innovation achievements	Industry-driven policy breakthrough	Technology-culture activities	-

3.3.1 Value Upgrading of Economic Capital

Economic capital is a strategic tool for leveraging other forms of capital and obtaining legitimacy and recognition. Its conversion efficiency depends on whether it can accurately address institutional and social pain points and demonstrate sustainability.

In this case, beyond direct investment appreciation for technology enterprises, capital operation by implementation entities showed two additional paths. First, whether investing in public domains, building government-enterprise cooperation platforms, or incubating science and technology industries, private enterprises undertook some public functions. This reduced the government's trial-and-error cost and fiscal pressure. By verifying the feasibility of some new rules tentatively introduced by government, they helped government convert these rules into more formal institutional arrangements, successfully turning material input into legitimacy certifications such as "policy innovation example" and "government-enterprise cooperation model."⑤ Second, by funding sustainable public-interest platforms and creating interactive spaces, economic capital moved beyond short-term charity. It continuously built interaction networks among local residents, incoming merchants, and outside visitors, accumulating emotional recognition such as "corporate social responsibility reputation" and "local cultural identity" (Table 2).

Table 2. Economic Capital Conversion in the Urban Regeneration Field

Initial capital	Conversion direction	Conversion strategy	Empirical evidence	Generated symbolic capital	Symbolic attribute
Economic capital	Institutional capital	Investment leveraging policy	Implementation entities invested in public domains and promoted the district government's formulation and revision of special-fund measures and matching subsidies	Policy innovation example label	Legitimacy certification
Economic capital	Institutional capital	Government-enterprise cooperation platform	Creater cooperated with a district-owned state enterprise to establish a regeneration platform and obtain operational decision-making rights over state-owned assets	Government-enterprise cooperation model label	Legitimacy certification
Economic capital	Social capital	Public-interest platform operation	Creater established the NGO Community Refresh, organized normalized community activities with more than 50 events annually, and funded public-interest activities	Corporate social responsibility reputation	Emotional recognition
Economic capital	Social capital	Creation of interaction spaces	The Yuxiang project used idle land to create "plant socializing," activated marginal groups, and broke interaction barriers	Activation of local cultural identity	Emotional recognition

Economic capital	Innovation capital	Customized carrier development	After Xinwei Smart Valley was established, it implemented many industrial regeneration projects, with related office carriers totaling about 15,000 m2	Science-innovation district model label	Legitimacy certification
Economic capital	Innovation capital	Angel investment	By August 2025, Xinwei Smart Valley had incubated and introduced 41 technology enterprises	"Silicon Alley" industrial landmark	Functional label

3.3.2 Rule Reinforcement of Institutional Capital

The core of institutional-capital conversion is to activate market and social potential through rule adjustment. Its conversion effect lies in transforming static rules into dynamic guidance that lowers risk and improves market expectations.

Changning significantly reduced the initial risks and costs for market implementation entities through policy combinations such as property-right transfer and fiscal subsidies [22]. It also enhanced community vitality and stability through participatory governance mechanisms. The value of these measures lies not only in direct economic incentives, but more importantly in transmitting stable policy expectations to market and society. Together with multiple actors, they shaped the case as a model of urban regeneration and gained legitimacy certification from higher-level authorities.⑥ At the same time, institutional capital directly responded to the core need of innovation activities for low-cost trial-and-error space through rent-cost controls. This attracted more than 900 science and technology enterprises, according to 2025 data, to gather in Silicon Alley and converted policy dividends into a core regional competitiveness, generating the functional label of "regional competitiveness in technological innovation."⑦ In this way, institutional capital rose from management to empowerment (Table 3).

Table 3. Institutional Capital Conversion in the Urban Regeneration Field

Initial capital	Conversion direction	Conversion strategy	Empirical evidence	Generated symbolic capital	Symbolic attribute
Institutional capital	Economic capital	Property-right transfer	State-owned assets along regeneration routes were integrated and leased in batches to implementation entities for unified regeneration and operation, with stepped rent discounts at the start	Urban regeneration model label	Legitimacy certification
Institutional	Economic capital	Fiscal subsidy	Since the implementation of Changning's special urban	Urban regeneration	Legitimacy

capital			regeneration fund, subsidies to private enterprises have exceeded 60% of the total	model label	certification
Institutional capital	Social capital	Participatory governance mechanism	The government helped establish the Hongye Garden lane deliberation council	Complete-community pilot	Legitimacy certification
Institutional capital	Innovation capital	Government funding support	The Changning Science and Technology Commission issued policy measures encouraging technological innovation, R&D, platform building, and carrier construction	Regional competitiveness in technological innovation	Functional label
Institutional capital	Innovation capital	Innovation-cost control	Urban regeneration projects reserved shared office spaces for start-ups, about RMB 500 per workstation per month, while state-owned asset carriers provided rent-free periods for growth enterprises	Science-innovation district model case	Legitimacy certification

3.3.3 Energy Accumulation of Social Capital

Social capital is centered on emotional community ties. Through conversion into other capital forms, it can derive multiple compound values radiating toward economic, institutional, and innovation dimensions. Social capital is not a passive stock resource, but a container with active adaptive capacity.

The Changning case fully shows this feature. In the economic dimension, the Yuyuan Road Story Store collected a large number of local cultural stories and packaged scattered collective memories into experiential and consumable cultural products. It attracted specific visitors seeking cultural depth and realized the commercial value of emotional recognition through the cultural IP of urban memory. In the institutional dimension, when residents' interests were harmed, long-accumulated social networks were rapidly activated and evolved into an efficient platform for collective action. They pushed local government and implementation entities to accept their demands and form binding conventions, thereby gaining legitimacy recognition for community governance through institutionalized channels. In the innovation dimension, the normalized Silicon Alley Breakfast Meeting constructed a low-cost local trust network and knowledge-transmission channel. It broke identity barriers among government, enterprises, and institutes through informal knowledge exchange and relationship building, fostered the emergence of a geographically embedded industrial ecosystem, and greatly reduced the contractual and friction costs of innovation cooperation (Table 4).

Table 4. Social Capital Conversion in the Urban Regeneration Field

Initial	Conversio	Conversion	Empirical evidence	Generated	Symbolic

capital	n direction	strategy		symbolic capital	attribute
Social capital	Economic capital	Commercialization of local cultural IP	Over six years, the Story Store held more than 100 events and collected more than 10,000 stories about local Shanghai culture, attracting many young visitors and increasing foot traffic for district merchants	"Urban memory" cultural IP	Emotional recognition
Social capital	Institutional capital	Collective action forcing rule adjustment	Residents of Hongye Garden jointly opposed the excessive intrusion of internet-famous shops into community space, eventually leading to the Commercial-Residential Lane Management Convention	Legitimacy of community self-governance	Legitimacy certification
Social capital	Innovation capital	Informal knowledge network	The normalized Silicon Alley Breakfast Meeting regularly brought together people from different sectors, inviting 10-15 organizations to each session and building a geographically embedded industrial ecosystem	Reputation as an open innovation community	Emotional recognition

3.3.4 Dividend Release of Innovation Capital

The conversion of innovation capital is not simply technological monetization. Its core value is to act as a catalytic medium for institutional and social iteration. The realization of innovation capital lies in its continuous release of transformative momentum, driving co-evolution of technology, institutions, and society.

This process appears on three levels. Economically, its outputs are explicit and quantifiable: the annual tax contribution of enterprises incubated by Xinwei Smart Valley increased markedly, showing the rapid appreciation effect generated by combining innovation activities with spatial carriers and establishing the functional label of "regional competitiveness in technological innovation." Institutionally, new ways of using stock space by science and technology enterprises often conflict with lagging regulations. The significant economic and political value they generate provides strong empirical support for policy adjustment and pushes institutional actors to make adaptive revisions [22], so innovation practice gains the legitimacy certification of an "institutional innovation experiment." Socially, innovation capital actively integrates locally through science festivals, science exhibitions, and other events. These actions reduce the divide between technology and society, enhance mutual understanding, and build emotional ties between innovation capital and community residents, forming the emotional recognition of a model of "industry-city-people integration" (Table 5).

Table 5. Innovation Capital Conversion in the Urban Regeneration Field

Initial capital	Conversion direction	Conversion strategy	Empirical evidence	Generated symbolic capital	Symbolic attribute
Innovation capital	Economic capital	Transformation of innovation achievements	Enterprises incubated and introduced by Xinwei Smart Valley generated comprehensive tax revenues of RMB 75 million in 2022 and RMB 120 million in 2023	Regional competitiveness in technological innovation	Functional label
Innovation capital	Institutional capital	Industry-driven policy breakthrough	Shanghai's policy measures on expanding effective investment and stabilizing economic development support the use of existing buildings on allocated land for new business forms and models; land use, rights holders, and rights types may remain unchanged during a five-year transition period	Institutional innovation experiment	Legitimacy certification
Innovation capital	Social capital	Technology-culture integration activities	In 2025, the Changning Science and Technology Festival was held; during the event, Changning District and the Shanghai Science and Technology Museum formally signed an agreement for museum-school cooperation, providing more high-quality science resources to the public	Model of industry-city-people integration	Emotional recognition

The section above shows how the four forms of initial capital interact in pairs within the urban regeneration field and generate symbolic capital with legitimacy, emotional, or functional attributes. However, the generation of symbolic capital through capital synergy is only the first half of alchemy, not its endpoint. How, then, does symbolic capital feed back into other capital forms and form a closed loop of value enhancement? The next section discusses the reinforcing effect of symbolic capital on initial capital, through which multiple values are jointly enhanced and a sustainable value cycle is formed.

3.4 Value Enhancement: The Feedback Loop of Symbolic Capital

The previous sections divided the four forms of initial capital in the urban regeneration field into structural capital and catalytic capital. Symbolic capital generated in the process of capital conversion feeds back into these two categories and forms a closed loop of capital synergy and value enhancement.

3.4.1 Symbolic Capital's Appreciation of Structural Capital

Changes in carrier rents directly show the appreciation of structural capital under the feedback of symbolic capital. This process is not simple linear growth, but a concentrated manifestation of value upgrading under capital synergy. Using Yuyuan Road as an example, Figure 3 shows the actual rent trend of street-facing shops. In Stage 1, under the input of institutional and economic capital, as buildings and the district environment improved, carrier rents gradually rose to the level of high-quality carriers in the same location. This rent increase conforms to traditional rent-gap theory and represents the initial release of potential ground rent brought by material spatial improvement. In Stage 2, under the effective operation of strategies such as cultural IP commercialization, functional labels such as "internet-famous district" and "check-in destination" were quickly generated. They endowed the space with an additional premium and, through strong resource attraction, attracted merchants and pushed actual carrier rents above the ceiling of high-quality carriers in the same location. In Stage 3, strategies such as public-interest platform operation and participatory governance gradually accumulated emotional recognition, while legitimacy recognition was also strengthened. Together they built a more stable business environment and community ecology, effectively avoiding possible declines in carrier value caused by traffic failure, and rents maintained high levels with strong resilience. In Stage 4, the strong functional label of "Shanghai Silicon Alley science and technology innovation district" brought high-value-added technology enterprises and young high-net-worth groups to the area. Regional economic vitality and consumption capacity further improved, and actual rents grew again. This demonstrates that the feedback of symbolic capital significantly increased economic capital.

In this process, the activation and profitability of state-owned assets followed a clear trajectory. In the early stage, state-owned units offered concessions by leasing assets at discounted prices, expanding profit space for implementation entities and helping them avoid losses during the start-up period. After the three-year concession period, returns on state-owned assets turned from negative to positive, and property-right holders also gained profits from asset activation. A true win-win relationship between public and private sectors was achieved. The profitability of activated state-owned assets provides strong evidence of enhanced institutional-capital effectiveness. In addition, various forms of legitimacy certification provide the most fundamental feedback to institutional capital. Visible political achievements enable local government to obtain resources and policy support from higher-level departments more smoothly. This not only strengthens existing institutional capital, but also provides longer-term and more stable rule expectations for the field.

3.4.2 Symbolic Capital's Activation of Catalytic Capital

Compared with structural capital, catalytic capital is itself more symbolic. Its core value often lies not in material entities, but in fluid and relational symbolic meaning. The feedback of symbolic capital to catalytic capital is not simply a logic of value appreciation, but rather the reproduction of symbolic value. By granting catalytic capital broader recognition and stronger attraction, symbolic capital allows it to be activated, circulated, and expanded.

As the case shows, the legitimacy certification of a community self-governance model transformed dispersed and temporary defensive alliances among residents into a sustainable governance model recognized by institutions. The emotional recognition of urban-memory cultural IP internalized local residents' sense of honor into a stronger sense of belonging and pride, deepening social capital and enabling intergenerational transmission. Functional labels such as "Shanghai Silicon Alley" and "science-innovation landmark" are even stronger signaling mechanisms. The industrial ecosystem and value consensus formed under these labels greatly reduced risk costs for start-ups and directly catalyzed the inflow and expansion of innovation capital.

Thus, symbolic capital's feedback to catalytic capital is an enabling process. It integrates social capital and innovation capital from dispersed and latent states into strong momentum that drives the field's continuous evolution. This is the crucial second half of spatial alchemy: turning symbolic recognition into real productive force.

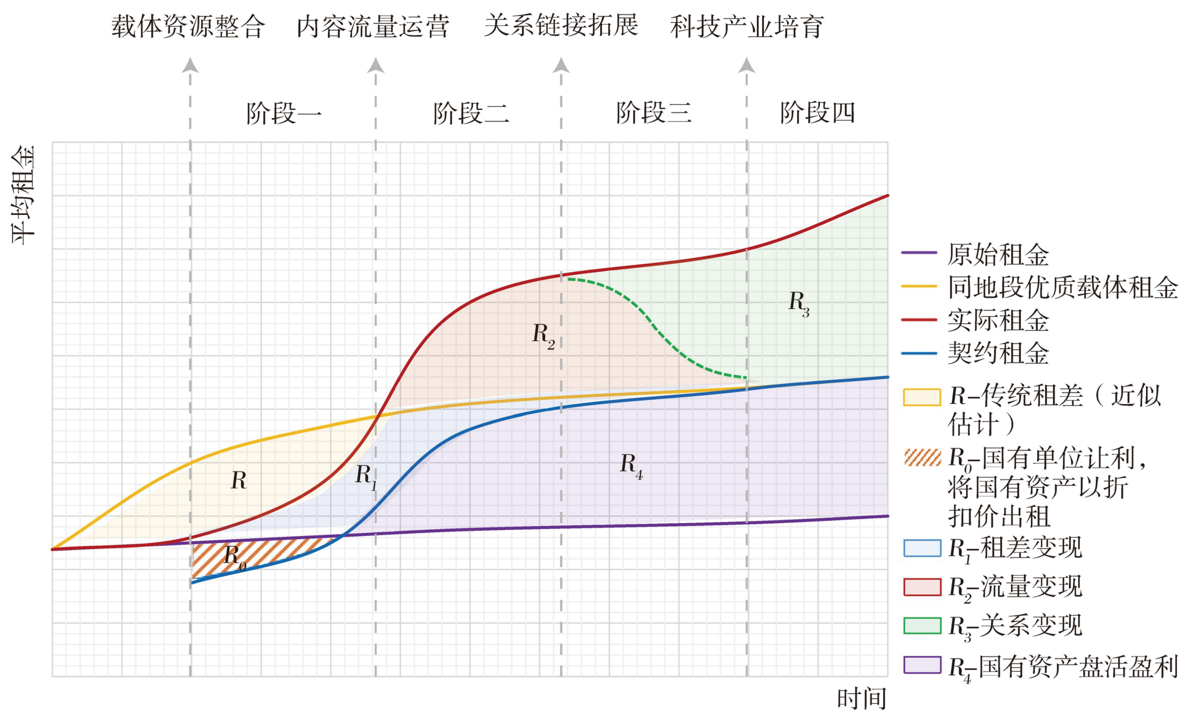

Figure 3. Rental increase trends in the regeneration process of the Eastern Historic Area in Changning District.

4 Conclusions and Prospects

This study innovatively introduces field theory and constructs a multidimensional capital framework including economic, institutional, social, innovation, and symbolic capital. It focuses on the upgrading conversion from initial capital to symbolic capital in the urban regeneration field and on how symbolic capital feeds back into different capital forms to create a sustainable closed loop of value enhancement. The study reveals spatial alchemy in the urban regeneration field, namely a dynamic circular pathway of value enhancement oriented by capital synergy. This pathway takes structural capital, economic and institutional capital, as the system base. Through the mediating role of catalytic capital, social and innovation capital, it realizes value upgrading toward symbolic capital and forms significant premium effects and resource-attraction capacity. These effects are not endpoints; they continuously flow back into the field, feed and increase initial capital, and build a self-reinforcing and continuously evolving closed loop of value reproduction. This mechanism offers strong insight for understanding and optimizing urban regeneration. As a theoretical proposition, it has significant practical exploratory value and may provide a new perspective for paradigm transformation in urban regeneration research.

The ten-year gradual regeneration process of the Eastern Historic District of Changning verifies this theoretical mechanism. Multidimensional capital synergy shaped urban regeneration actions, guided the gradual realization of multiple meanings of urban regeneration, broke through the logic of single accumulation, and generated holistic value enhancement. It provides an empirical sample of sustainable circulation for stock regeneration in central urban areas.

The limitation of this study is that, due to the research framework and length, it does not fully elaborate the critical core of Bourdieu's theory of alchemy, namely the revelation of symbolic violence and the complicity between capital conversion and the construction of legitimacy [20]. One key future research agenda is to use this critical perspective to deeply deconstruct the operation of spatial power in China's urban regeneration field.

Notes

① On the basis of the more general government-market-society tripartite framework, this study further divides market actors into implementation entities and industrial actors. This is because technological spillovers from emerging industries constitute a core engine of spatial value appreciation, while industrial actors and implementation entities follow different behavioral logics.

② Major local-government expenditures mainly involved: first, consolidation and undergrounding of overhead utility lines; second, "beautiful block" construction, both of which were already included in the fiscal budget and were only prioritized in timing rather than added as extra expenditures; third, very limited point-based expropriation of public housing; and fourth, district-level special urban regeneration subsidies. Over eight years from 2018 to 2025, these subsidies for historic-district regeneration projects totaled more than RMB 30 million.

③ According to information published on the official website of the Changning District Housing Security and Housing Administration Bureau, since 2014 there have been only three expropriation cases within the key regeneration road sections of Changning's historic district. They involved No. 4 and No. 5, Lane 290, Wuyi Road; the even-numbered addresses No. 2-48, Lane 305, Wuyi Road; and No. 3-23, Lane 337, Wuyi Road, together with the odd-numbered addresses No. 339-347, Wuyi Road.

④ Xinwei Smart Valley was established in October 2019 as the main implementation entity for regeneration in the Silicon Alley district. It successively implemented many regeneration projects in nearby areas, including Xinwei Smart Valley T1, Xinwei Smart Valley T2, Silicon Alley No. 1, and Building No. 1 of the Shanghai Institute of Ceramics. The relevant office carriers total about 15,000 m2. It invested in, incubated, and introduced 41 technology enterprises. In 2022 and 2023, these introduced enterprises generated comprehensive tax revenues of RMB 75 million and RMB 120 million, respectively.

⑤ The 2024 Shanghai Urban Regeneration Blue Book, 27 Sustainable Urban Regeneration Models: Practice and Innovation, compiled by the Shanghai Urban Regeneration Leading Group, the Shanghai Municipal Commission of Housing and Urban-Rural Development, and the Shanghai Municipal Bureau of

Planning and Natural Resources, introduces and affirms the economic and developmental sustainability of "introducing social capital" in the Yuyuan Road case.

⑥ In 2025, the Jiangsu Road complete community in Changning District was selected for the Typical Cases of Urban Regeneration (Second Batch) issued by the Ministry of Housing and Urban-Rural Development. In the same year, the Wuyi Road block and Columbia Circle won the Excellence Award in the first Shanghai Excellent Urban Regeneration Practice Cases, while the Yuyuan Road block received a nomination. In 2024, the Yuyuan Road block was included in the Ministry of Culture and Tourism's third batch of national nighttime culture and tourism consumption clusters; it was also included in the first list of Shanghai characteristic catering-cluster streets, selected as a Shanghai launch landmark, and awarded the Shanghai Business Innovation Award. In 2023, the Yuyuan Road block was rated by the Ministry of Culture and Tourism as part of the second batch of national tourism and leisure blocks, among other recognitions.

⑦ In 2020, the Shanghai Association for Science and Technology launched the research project on pilot cultivation for integrated development of technology and economy, and Changning's Xinwei model became one of five pilot cultivation plans. In 2021, Changning was selected as a second-batch Science and Technology Innovation China pilot city. In 2022, the Shanghai Silicon Alley science and technology innovation district was successfully declared as the Changning pilot area of Science and Technology Innovation China. In 2023, Changning was selected by the China Association for Science and Technology as an innovation-driven demonstration city for 2023-2025.

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