

Case Analysis on Creative Cultural Revitalization of Old Blocks and Urban Governance Upgrade under the Background of Urban Renewal

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Abstract. As urban renewal in the Guangdong-Hong Kong-Macao Greater Bay Area has entered the stage of stock organic renewal, the large-scale demolition and reconstruction renovation model has gradually faded out of practice, and the revitalization of old heritage relying on creative culture has become an important direction. Macao boasts a large number of old blocks and industrial sites carrying local historical memories, which are generally plagued by dilapidated buildings, abandoned functions and loss of vitality. Simple government-led engineering renovations cannot sustain long-term vitality, so it is urgent to examine heritage revitalization paths from the perspective of urban governance. Taking the revitalization project of Yilong Firecracker Factory in Macao as the research object, this paper adopts the case analysis method, combines the Creative City Theory, Genius Loci Theory and the Production of Space Theory, and discusses the internal logic of creative cultural revitalization driving the renewal of old blocks and promoting the upgrading of urban governance. The study finds that the intervention of creative culture can effectively activate idle industrial heritage and reshape the local genius loci, and a multi-stakeholder collaborative governance framework provides an institutional foundation for the sustainable operation of heritage. Meanwhile, the project is confronted with practical dilemmas including insufficient industrial sustainability, lack of community participation and conflicts in cultural tourism development. The research indicates that the revitalization of old blocks should not be limited to spatial transformation. Instead, a long-term governance system with multi-party participation should be constructed. This paper offers practical references for the organic renewal and heritage revitalization governance of similar historical districts in the Guangdong-Hong Kong-Macao Greater Bay Area.

Keywords: urban renewal, heritage revitalization, creative culture, urban governance, industrial heritage

1. Introduction

As urbanization in the Guangdong-Hong Kong-Macao Greater Bay Area enters a stage of stock quality improvement, the traditional large-scale demolition and reconstruction model of old city renovation has gradually withdrawn from practice, and micro-renovation and organic urban renewal

have become the mainstream development paths for cultural heritage protection and urban construction. Macao retains numerous old blocks and industrial sites bearing the collective historical memories of local residents, which commonly face practical difficulties such as dilapidated building structures, obsolete original functions, population outflow and declining block vitality. Engineering renovations solely led by the government fail to maintain long-term vitality of heritage spaces. In recent years, Macao has actively explored a revitalization model driven by cultural creativity to regenerate heritage spaces, activating idle heritage sites through art exhibitions, cultural and creative events and other forms. Such practice also puts forward new propositions for the existing urban governance system.

Current academic circles have carried out extensive research on block revitalization and heritage regeneration, yet most existing studies focus on building renovation or tourism development benefits. There are still few in-depth conversations about the governance reasoning, operational flaws, and sustainable solutions underlying the revitalization of local Macao industrial legacy.

This paper employs the case analysis method, selects Yilong Firecracker Factory in Macao as a typical case, conducts analysis based on three classic theories, and sorts out the implementation paths and governance contradictions of revitalization. The value of this research lies in basing on a local Macao case, breaking away from the single perspective of cultural tourism development, reflecting on heritage revitalization models from the level of urban governance, providing referable governance experience for the sustainable renewal of other historical urban areas in the Greater Bay Area, and advancing urban renewal toward an inclusive, beneficial and win-win development path for all stakeholders.

2. Theoretical foundation of revitalization

This paper takes the Creative City Theory, Genius Loci Theory and the Production of Space Theory as the core theoretical supports for the case analysis.

First, the Creative City Theory posits that the core driving force of contemporary urban development no longer lies in traditional industry or real estate development, but in activating stock spaces through creative resources, cultural activities and creative classes. For old blocks and abandoned sites, cultural and creative exhibitions, public art and cultural events can revitalize district vitality at low costs, cultivate a new cultural economy without large-scale demolition and construction, and facilitate the governance transformation of the government from engineering renovation to cultural operation [1].

Second, the Genius Loci Theory emphasizes that the significance of space is found not only in the actual buildings but also in the cultural identity and historical feelings that long-term residents have created. The core goal of revitalizing old districts is not merely to renovate buildings, but to restore the unique memory value of sites, revitalization design should respect the historical context of sites, preserve local stories, and rebuild emotional bonds between people and places [2].

Third, the Production of Space Theory proposes that urban space is a product jointly shaped by multiple forces, encompassing physical space, consumption space and social relationship networks. In heritage revitalization projects, the government, operation teams, tourists and local residents all participate in space reconstruction. While cultural development activates the economic value of districts, it also alters the original social structure and gives rise to governance issues such as interest conflicts and gentrification, which serve as the theoretical basis for critical reflection in this paper [3].

3. Case study: revitalization project of Yilong Firecracker Factory in Macao

Located in Taipa, Macao, Yilong Firecracker Factory was relocated and put into production in 1925 by Deng Bitang, a native of Nanhai, Guangdong Province. It is Macao's best-preserved firecracker industrial historical site that has been in operation for almost 60 years [4, 5]. The firecracker industry was once one of Macao's three major traditional handicrafts. At its peak, the factory employed four to five hundred workers, with products sold far overseas. After full closure in 1984, the site remained idle for a long time. It was taken over by the Cultural Affairs Bureau of Macao SAR Government in 2020, and the "Yilong Firecracker Factory Heritage Trail" officially opened to the public in December 2022 [4, 5].

3.1. Development dilemmas

First, renovation progresses slowly with deficiencies in supporting facilities and building safety. Renovation works of the project were launched at the end of 2022, while partial supporting facilities remained unfinished by mid-2025 [6-8]. The overall renovation cycle is overly prolonged, external publicity channels are limited, tourist supporting services need improvement, and long-term structural safety hazards exist in some walls, impairing visitors' travel experience [6, 7].

Second, location competition leads to passenger flow loss, failing to effectively transform historical and cultural value. Adjacent to the mature cultural tourism district of Rua do Cunha, Yilong Firecracker Factory faces sustained passenger diversion from well-known scenic spots and chronically low visitor volume, with an average daily admission of approximately 50 people and meager revenue from cultural and creative businesses [9]. A large number of pedestrians merely pass through the site without willingness for in-depth visits. Meanwhile, the project lacks a highly recognizable core cultural IP and sufficient promotion, making it difficult to fully convey the cultural connotations of industrial heritage [7, 8]. Relevant suggestions propose organically integrating Yilong Firecracker Factory with surrounding characteristic historical attractions and boosting its popularity through movie shooting locations and internet influencer promotion [9].

Third, the industrial support system is fragile, posing challenges to long-term sustainable operation. At present, the popularity of the park heavily relies on short-term festival events and temporary special exhibitions, with heat fading rapidly after event closures and a lack of stable regular operational businesses. Tenders for the first batch of supporting buildings were not officially launched until July 2026, rendering self-generated revenue insufficient to cover daily operation and maintenance expenses [10]. Industry insiders suggest introducing differentiated businesses such as parent-child intangible cultural heritage handcraft workshops and eco-friendly cultural and creative spaces to avoid homogeneous competition with surrounding snack and souvenir shops [8].

Fourth, the absence of community participation mechanisms creates barriers to multi-stakeholder collaborative governance. Planning and operational decisions of the project are mainly dominated by government departments and cooperative enterprises, with no regular consultation channels for local residents and local social organizations. The Investigation Report on the Land Exchange Case of Yilong Firecracker Factory released by the Commission Against Corruption in 2016 revealed that the Commitment Letter on land exchange signed between the government and Baía de Nossa Senhora Development Co., Ltd. in 2001 violated legal provisions and the agreement was invalid [11]. The case involved an implicit land debt issue exchanging 1,655 square meters of private land for over 150,000 square meters of government land, prompting civil groups to file reports with the Public Prosecutions Office. This incident objectively damaged the government's credibility in district governance, and the public harbors concerns over benefit distribution of the revitalization

project. Residents and social organizations are provided with limited substantive channels for decision-making participation. Accordingly, adjusting revitalization measures to align with the real needs of local communities remains an urgent governance challenge that needs to be addressed.

3.2. Implementation paths

First, protective restoration of heritage. On the premise of preserving historical buildings and original ecological landscapes, the Cultural Affairs Bureau carried out partial restoration following the principle of "restoring the old as it was". The heritage trail stretches approximately 400 meters, along which visitors can view historical structures including pulp lead workshops, water channels, firecracker carving workshops and warehouses, with a guided tour system displaying firecracker production procedures [5, 12]. By the end of 2025, restoration of major buildings was completed, and follow-up revitalization was placed under the purview of the Economy and Finance portfolio [13].

Second, implantation of cultural exhibitions and creative industries. On the opening day of the heritage trail, the "Echoes of Smoke: History of Macao's Firecracker Industry" exhibition was held and a cultural and creative gift shop opened [5, 12]. Starting from September 2023, Sands China intervened in operation under the guideline of "Reconstruct, Revitalize, Integrate the Old and Forge the New", launching festival activities including AI interaction and parent-child workshops [14]. A special exhibition "Splendid Glow: A Century of Yilong" was held in 2026 to mark the factory's centenary, showcasing more than 400 original firecracker packaging posters and production tools [15]. In July 2026, the District Development Center took over and launched tenders for the first phase of six small houses [10].

Third, multi-stakeholder collaborative governance. The Macao SAR Government established an inter-portfolio working group, with the Economy and Finance portfolio coordinating the development of six major districts. The Cultural Affairs Bureau undertakes heritage protection and basic restoration, Sands China invests in cultural tourism content and event planning, and the District Development Center is responsible for follow-up regular operation and investment promotion. Since September 2023, over 500 artistic performances have been jointly held, providing sales platforms for more than 200 local cultural and creative entities [15]. This collaborative model of "government-led restoration, enterprise-injected content, professional institution operation" sets an institutional model for governance innovation in the revitalization of historical districts in Macao.

3.3. Effects brought by revitalization

Culturally, the industrial memory of firecracker manufacturing has been systematically protected and disseminated, enabling the public to understand the collective memory linking the firecracker industry with people's livelihoods in Taipa, and the genius loci has been reawakened [5, 16]. Socially, the free public space enriches residents' leisure options, and festival events and markets boost community vitality [10, 14].

Governance-wise, the feasibility of the "asset-light, content-heavy" model has been verified, shifting away from the sole commercial development mindset and offering a new model for industrial heritage protection in Macao [15].

4. Summary of revitalization methods

The practice of Yilong Firecracker Factory delivers replicable experience for the revitalization of old industrial sites. First, adhere to protective micro-renovation, retain the historical texture of sites through partial restoration, and reject large-scale demolition and reconstruction [5, 13]. Second, adopt the "asset-light, content-heavy" strategy to activate spaces at low costs through flexible approaches such as temporary exhibitions and festival events [14-16]. Third, construct a multi-party collaborative framework of "government-enterprise-professional institution" with clear division of labor and respective responsibilities [15]. Fourth, face up to the long-term nature of revitalization — low passenger flow and insufficient industries indicate that revitalization is not a one-off project, requiring sustained institutional investment and governance innovation [8, 9, 14]. Particular emphasis should be placed on constructing community participation mechanisms to ensure revitalization outcomes truly benefit local residents [16].

5. Conclusion

Against the research background of urban renewal, this paper conducts a case analysis centered on creative cultural revitalization of old blocks and urban governance upgrading, selects Yilong Firecracker Factory in Macao as the research case, and completes in-depth analysis relying on the Creative City Theory, Genius Loci Theory and the Production of Space Theory. The study confirms that creative cultural revitalization serves as a feasible path for the regeneration of old industrial heritage in Macao: the intervention of cultural creativity can revitalize idle stock heritage, rescue local historical memories and build public cultural spaces. Meanwhile, revitalization projects drive the transformation of traditional governance models from exclusive government administration to multi-stakeholder collaborative governance, facilitating the upgrading of urban governance capacity.

At the same time, the case reveals existing shortcomings in Macao's heritage revitalization: the project features a weak profit model and operation is highly dependent on fiscal support, mature mechanisms for in-depth public community participation are yet to be established, contradictions between cultural tourism passenger flow development and community livable environments persist. However, this paper only conducts qualitative analysis on a single Macao case without data comparison across multiple projects, and more comprehensive conclusions can be drawn by expanding sample size in follow-up studies.

Several optimization directions can be proposed for the future revitalization of old blocks and urban governance in Macao and the Greater Bay Area. First, build diversified sustainable business models and cultivate regular cultural and creative industries to reduce reliance on government subsidies. Second, establish regular community consultation platforms to enable residents to genuinely participate in the design and supervision of revitalization plans. Third, construct a collaborative governance system balancing heritage protection, cultural tourism development and people's livelihood security. Relevant future research can quantitatively assess the social benefits of multiple revitalization projects in Macao and explore an inclusive heritage revitalization governance model suited to the characteristics of Macao as a small city.

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