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ARTICLE

The Formation and Development of Zhuhai Shuanglongshan Art District under Post-Industrial Transition

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ABSTRACT

Since the 1970s, global deindustrialization has turned urban industrial relics into contested sites of post-industrial transition. Western cities pioneered artist-led regeneration, but districts like New York's SoHo, London's Shoreditch, and Berlin's Kreuzberg typically gentrified within 5–10 years, displacing artists through rising rents and commercialization. In China, state-led urbanization and land-finance logics have accelerated similar outcomes in major art districts such as Beijing's 798, Shenzhen's OCT-LOFT, and Shanghai's M50, reinforcing “gentrification fatalism.” This study examines Zhuhai's Shuanglongshan Art District as a rare counter-example in a small-to-medium-sized city. Spontaneously formed in 2019 and sustained through 2025, the 73,000 m² district with over 30 studios has preserved stable low rents, low commercialization, and high artistic originality, with virtually no artist displacement. Using in-depth case study methods—including long-term fieldwork, semi-structured interviews, participant observation, and archival data—this paper reveals how deep university anchoring supplies stable creative talent. Knowledge spillover and symbolic production prioritize academic exploration and cultural dialogue over investment returns, effectively blocking commercial gentrification. Theoretically, it extends Florida's 3T framework and Bell's post-industrial theory to micro-level anti-gentrification processes in lower-tier cities, proposing a replicable “university-anchored” model emphasizing

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low policy embeddedness and organic growth. Practically, it provides a low-cost, sustainable paradigm for China's over 280 prefectural-level cities, showing that institutional inclusiveness can interrupt the classic gentrification cycle.

Keywords: Post-Colonial Adaptation; Shuanglongshan Art District; Cultural Regeneration; Knowledge Spillover; Art + Technology

1. Introduction

1.1. Background

Since the 1970s, the global wave of deindustrialization has left large numbers of factories, warehouses, and other industrial relics in urban centres, turning these sites into the most symbolically potent and contested spatial carriers of post-industrial transition. Western cities pioneered the conversion of production spaces into cultural spaces through spontaneous artist occupation and creative-industry clustering. Iconic art districts such as New York's SoHo, London's Shoreditch, and Berlin's Kreuzberg once stood as global exemplars of urban regeneration and the rise of the creative economy. Almost without exception, however, these districts entered the gentrification cycle within 5 to 10 years: soaring land rents forced artists out, galleries and cultural-tourism businesses took over, and authentic creativity rapidly declined^[1]. This trajectory of "gentrification fatalism" has long dominated academic and policy discourse, making the prevention of capital-driven takeover one of the most intractable dilemmas in global urban studies^[2].

In the Chinese context, the cultural regeneration of post-industrial spaces presents a more complex picture. On the one hand, the state-led urbanization and land-finance logic have caused the reuse of industrial heritage to be highly embedded in policy and capital cycles^[3]. On the other hand, well-known art districts such as Beijing's 798, Shenzhen's OCT-LOFT, Shanghai's M50, and Guangzhou's Redtory have all, without exception, undergone a transformation in a short period from original artist communities into highly commercialized cultural tourism complexes, with large-scale artist exodus becoming a common outcome^[4]. Existing literature largely attributes this phenomenon to the inevitability of "Chinese-style gentrification," yet few studies have focused on the question: In non-first-tier, non-capital-driven small and medium-sized cities, is it possible for a regenerative path to emerge that

truly resists the classic gentrification cycle and maintains high originality over the long term?

Zhuhai's Shuanglongshan Art District constitutes such a rare counter-example. From its spontaneous genesis in 2019 to 2025, the district, which occupies 73,000 m² and houses over 30 studios, has largely maintained its original rent, exhibits an extremely low degree of commercialization, and still preserves a strong atmosphere of originality and academic exploration. This phenomenon not only challenges the universality of existing gentrification theories but also provides a replicable gentle regeneration paradigm for a large number of small and medium-sized cities with limited resource endowments.

1.2. Contribution

This paper takes the Zhuhai Shuanglongshan Art District as an in-depth case study, seeking to answer: Can the cultural regeneration of post-industrial spaces escape the classic gentrification cycle in the context of small and medium-sized cities with weak capital intervention? Can the university serve as a locally embedded anchor institution, supplying stable creative talent to small and medium-sized cities and counteracting the logic of commercial gentrification through knowledge spillover and symbolic production? Has Shuanglongshan successfully formed a unique and replicable "University-Anchored" regeneration model?

This research establishes the university as a critical institutional variable in resisting gentrification and explicitly defines knowledge spillover and symbolic production as the intermediary anti-gentrification mechanisms. It thus extends Florida's 3T theory from the macro-attraction in first-tier cities to a micro-level anti-gentrification path in second- and third-tier cities^[5]. Furthermore, by integrating Bell's logic concerning the supply of post-industrial space, the study constructs a dynamic regeneration model that emphasizes low policy embeddedness and deep university anchoring, thereby filling the gap in existing literature re-

garding the long-term sustainability of creative spaces in small and medium-sized cities^[6,7].

On the practical level, over 280 prefectural-level cities in China commonly face the dilemmas of a large stock of industrial heritage, a weak creative class, and excessive capital drive. The experience of Shuanglongshan—using the inclusiveness of the university to suppress real estate capital and achieving long-term high originality through low-cost, spontaneous renovation—offers a cultural regeneration path for the vast number of small and medium-sized cities that is low in fiscal burden, highly replicable, and highly sustainable^[8].

2. Literature Review and Theoretical Framework

2.1. Post-Industrial Transformation Theory

Daniel Bell, the proponent of post-industrial transformation theory, divided human social development into three stages: pre-industrial, industrial, and post-industrial. Bell proposed in 1973 that the post-industrial society is no longer centered on the production of material goods, and instead regards “knowledge” and “information” as its core resources. The socioeconomic structure consequently undergoes a fundamental shift, with the dominant industries moving from manufacturing to the service sector, information industries, and knowledge-intensive industries. Professional and technical personnel, along with the white-collar class, assume a dominant position in the occupational structure. Urban space also exhibits deindustrialization, as numerous factories relocate, leaving idle industrial remnants in city centers, which provide a physical carrier available for transformation into new spaces for cultural production and creative industries. This theoretical framework offers a solid foundation for explaining the phenomenon of cultural regeneration using old industrial spaces in global cities, particularly those in developed Western nations, following deindustrialization.

However, when applying Bell’s classic theory to the context of large non-Western developing countries like China, its applicability faces a series of localization and contextual challenges. In China, the processes of urbaniza-

tion and deindustrialization are often driven by the state or local governments, rather than being a purely market-driven natural evolution^[9].

Firstly, the complexity of land ownership and strict land-use regulations make the conversion of industrial land to cultural and creative land use lengthy, costly, and fraught with uncertainty^[10]. Local governments tend to prioritize land resources for real estate development, which generates quick fiscal revenue. This often leads to the knowledge economy spillover effects of industrial heritage being easily diluted or even swallowed up by a utilitarian “real estate commodification.” Secondly, while the government’s strong dominance in planning can swiftly integrate resources in the short term, it often suppresses the spontaneous, organic, and original growth forces of artists and the creative class. This ultimately leads to the problems of homogenization and over-commercialization in art districts^[11].

In the case of Zhuhai, a non-first-tier city, its development model differs from that of traditional industrial metropolises. Zhuhai’s industrial remnants are relatively small in scale, and its deindustrialization process has been comparatively smooth and gentle, having not experienced the dramatic “creative destruction” seen in Western cities^[12]. Therefore, Zhuhai’s transformation of old industrial spaces focuses more on “gap-filling” spatial reconstruction—that is, utilizing existing resources to complement the city’s deficiencies in culture and arts, higher education, and industry-academia-research integration—rather than a complete, replacement-style structural upheaval^[13].

This unique, gentle transformation model implies that to effectively explain the formation and development of the Shuanglongshan Art District (**Figure 1**), we cannot rely solely on Bell’s general discussions of knowledge and information resources. Instead, the theoretical framework must be amended to incorporate the consideration of China’s stage-specific urbanization characteristics, the interaction between key actors such as local government and universities, and localized variables like Resource Embedment^[14], to accurately capture the inherent dynamics and mechanisms behind its transformation. For this reason, this paper will further introduce the university as a key anchor institution to explain why the Zhuhai Shuanglongshan Art District successfully resisted the classic gentrification cycle after deindustrialization.



Figure 1. Theoretical Framework.

2.2. Cultural and Creative Industries Theory

In 2002, Richard Florida's Creative Class Theory proposed that the three "T" elements—Talent, Technology, and Tolerance—drive urban attractiveness, making the creative industries a new engine for economic growth. This theory has been validated in global first-tier cities, such as London and San Francisco.

However, its applicability is limited in cities below the first tier, such as Zhuhai. Firstly, the creative class is small and less mobile, making it difficult to form a critical mass in the short term. Secondly, high-end technological infrastructure is relatively lagging, meaning creative industries struggle to obtain sufficient technological empowerment. Thirdly, although social tolerance is generally high, the insufficient depth and purchasing power of the

local consumer market restrict the monetization ability of creative products^[15]. The case of the Shuanglongshan Art District indicates that in small and medium-sized cities, university anchoring can serve as a key variable to compensate for the limitations of the 3T theory, effectively delaying or even disrupting gentrification displacement.

2.3. Comparison of Domestic and International Art District Transformation Cases

To highlight the distinctiveness of the "Zhuhai Model" in the Shuanglongshan Art District, this section focuses on a three-dimensional comparison: organicity, degree of government intervention, and industrial structure (See **Table 1**).

Table 1. Comparison of Art District Transformation Models.

Art District	Organicity	Government Intervention	Leading Industry	Governance Model	Artist Displacement Observed
Beijing 798	Low	High	Cultural Tourism & Commerce	Policy-Driven Redevelopment	Yes
Shenzhen OCT-LOFT	Medium	Medium	Design + Creative Retail	Developer + Government Collaboration	Yes
New York SoHo	High	Low	Gallery + Studio	Spontaneous Artist-Led	Yes
Shuanglongshan	High	Low	Creation + Education + Incubation	University Anchoring + Spontaneous Renovation	No

Beijing 798: Characterized by strong government intervention in the later stages, a shift in industrial structure from artistic creation to cultural tourism and commerce, and low organicity. The governance model is policy-driven

redevelopment.

Shenzhen OCT-LOFT: Developer-led, with an industrial structure leaning towards design consulting and creative retail, and medium organicity^[16]. Recent studies indicate that its “City of Design” positioning has reinforced the technology and tolerance factors, yet the creative class remains highly reliant on external input. The governance model is developer and government collaboration^[17].

New York SoHo: Characterized by strong organicity, minimal government intervention, and an industrial structure centered on the gallery economy and studios. The governance model is spontaneous artist-led.

Beijing’s 798 relied on policy re-positioning, while OCT-LOFT was embedded in urban design strategies. Other industrial heritage areas suffered artist loss due to over-commercialization^[18].

The Shuanglongshan Art District, in contrast, exhib-

its high originality, meaning artists spontaneously transform old factory buildings; low government intervention, meaning it did not rely on large-scale fiscal subsidies^[19]; and a mixed industrial structure, meaning it encompasses diverse functions such as art creation, educational training, and creative incubation. This has led to the formation of a unique “University—Artist—Old Space” co-existence model, which possesses significant theoretical and practical research value^[20].

2.4. Theoretical Framework Construction

The core contribution of this paper lies in constructing the “Post-Industrial Space Cultural Regeneration Model” (see **Figure 2**), which elucidates the logic of the Shuanglongshan Art District’s leap from material production to cultural production:

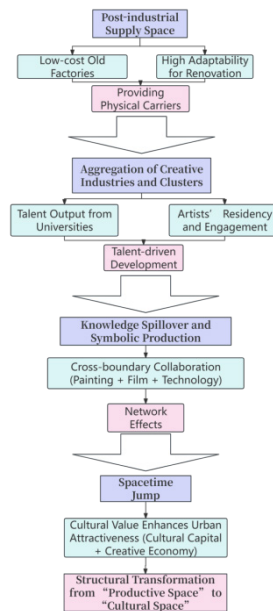


Figure 2. Cultural Regeneration Model for Post-Industrial Space.

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| <p>(1) Post-Industrial Supply Space: Old factory buildings provide the physical carrier due to their low cost and high modifiability;</p> <p>(2) Creative Class Anchoring and Agglomeration: Universities, specifically MUST and BNU Zhuhai Campus, supply talent, and artists spontaneously settle, forming a knowledge spillover network;</p> <p>(3) Knowledge Spillover Drives Symbolic Production:</p> | <p>Cross-sector collaboration in painting, film/TV, and technology generates cultural symbols, such as exhibitions, short films, and creative cultural products;</p> <p>(4) Symbolic Production Promotes Space Leap: Cultural value feeds back into urban attractiveness, achieving a structural transformation from “production space” to “cultural space.”</p> <p>This dynamic mechanism design holds significant</p> |
|--|---|

theoretical importance because it effectively compensates for the neglect of micro-level paths in small and medium-sized cities within Florida's Creative Class Theory. Florida's theory primarily focuses on the macro-level emphasis of the "3T" elements' attractiveness to global first-tier cities, yet it struggles to explain how creative talent can be effectively anchored and continuously innovative in lower-tier cities where the creative class is small and less mobile.

The most central theoretical contribution of this paper is the construction of the "Post-Industrial Space Cultural Regeneration Model," which establishes university anchoring as a stable institutional source of creative talent for small and medium-sized cities, and explicitly defines knowledge spillover and symbolic production as the intermediary mechanisms that interrupt the classic gentrification cycle. This successfully extends Florida's 3T theory downwards, moving from macro-attraction to a micro anti-gentrification process. This model successfully explains the intrinsic logic behind why the vast majority of art districts globally move toward commercialization and artist displacement within 5–10 years, while the Shuanglongshan Art District maintained high originality as of 2025, and provides an operable institutional template for other small and medium-sized cities^[21].

3. Research Methods

This study adopts an in-depth case study strategy, focusing on the Zhuhai Shuanglongshan Art District to systematically examine the formation mechanisms and sustainable paths through which it resisted classic gentrification displacement in the context of a small and medium-sized city. The research period spanned from January 2020 to October 2025, during which five rounds of fieldwork were conducted, totaling approximately 11 months of residency in the district. A multi-method approach, primarily qualitative but supplemented by appropriate quantitative data, was used to ensure the depth and credibility of the research findings.

Data collection mainly involved three categories: First, semi-structured in-depth interviews, with a total of 28 completed interviews. Interviewees included 12 resident artists, 10 university faculty members, 2 park man-

agers and original property owners, and 3 surrounding residents and cultural consumers, with an average duration of approximately 70 min. All interviews were recorded with informed consent and transcribed verbatim, resulting in a total text volume of about 230,000 Chinese characters. Second is participant observation and informal conversation, where the researcher participated as a resident researcher in activities such as art salons, exhibition openings, weekend open days, and writing Spring Festival couplets for a cumulative total of 65 days, generating approximately 50,000 Chinese characters in field notes. Third is secondary and quantitative supplementary data, including the total measured area of 45,500 m², jointly measured with the property management in December 2024; the latest count of 30 studios recorded in October 2025; and data from the park's official public WeChat account and artist WeChat groups from 2020 to 2025, which indicate a total of 28 cross-university workshops and joint exhibitions, with approximately 140 cumulative faculty participations.

Furthermore, Beijing 798, Shenzhen OCT-LOFT, and New York SoHo were selected as comparative cases for systematic comparison across dimensions such as originality, degree of government or capital intervention, occurrence of artist displacement, and dominant industrial structure. Through the triangulation of in-depth interviews, long-term participant observation, archival documents, and quantitative data, this study achieves high internal validity and reliability based on a single in-depth case, providing a solid and reliable empirical foundation for extracting the "Post-Industrial Space Cultural Regeneration Model" and its core mechanisms.

4. Development History

4.1. Geographical Location and Historical Evolution

The Shuanglongshan Art District is located in the Shuanglongshan area of Qianshan Street, Xiangzhou District, Zhuhai City. It was originally a mechanical manufacturing and warehousing factory district under the Kolon Group. The complex, constructed in the 1990s, primarily functioned for hardware mold processing, plastic product manufacturing, and storage logistics, with peak annual

production value exceeding CNY 20 million. After 2010, following the outward relocation of Zhuhai's manufacturing sector, the factory complex gradually became vacant. By 2019, the vacancy rate had reached 85%, retaining only minimal warehousing functions, thus providing the physical foundation for post-industrial spatial reuse.

4.2. Starting Point of Transformation (2019–2021)

The year 2019 marked a critical node for the transformation. The initiator, Wang Fugang, first settled in the area at the end of 2019, leasing unit 01 in Building 54 to establish the first “Comprehensive Creation + Education Studio”. The first “Shuanglongshan Art Salon” was subsequently held, attracting 15 university faculty members, which signaled the spontaneous emergence of the art district. The Phase I project of the Shuanglongshan Art District had a total investment of CNY 1 million, covering an area of approximately 1700 square meters, with Phase II planning an investment of CNY 4 million for approximately 13,500 m². In 2020, the district entered a period of rapid development, attracting numerous university professors and lecturers from institutions such as Macau University of Science and Technology, Beijing Normal University Zhuhai Campus, and Beijing Institute of Technology Zhuhai College. Artists settled in succession, forming a distinctive comprehensive art park that integrates various forms, including artist studios, art design centers, art museums, and

art education.

4.3. Artistic Forms and Resident Entities (2022–2025)

As of October 2025, the existing studios occupy Buildings 2, 3, 4, 5, 53, and 54 along the street, as well as Buildings 47 and 48, which are situated near the front of the complex, providing space for artists' creation. The resident entities are dual-cored by university faculty and Hong Kong and Macao artists, which addresses Zhuhai's lack of professional art academy studios and establishes a “campus—art district” 30-minute creative ecosystem. Functionally, there are 9 creation-oriented studios covering painting, calligraphy, sculpture, and independent film, with representative institutions including Gu Yue Studio and Ye Huiquan Experimental Space. Building 5 features large exhibition venues with a total area of approximately 1500 square meters, which have hosted over 20 exhibitions. Additionally, there are 5 art education and training institutions covering children's aesthetic education, adult pottery, and film and television editing. Other entities include photography studios, cultural and creative enterprises, and film bases. Geographically, Zhuhai local entities account for 38%, university-associated entities account for 45%, and Hong Kong and Macao entities account for 17%. All these entities are situated within a 30-minute self-driving radius, laying the foundation for an organic transformation (**Figure 3**).



Figure 3. Real-shot View of Shuanglongshan Art District.

5. Core Drivers of the Shuanglongshan Art District's Formation

5.1. Spatial Drive

The art district contains a large stock of disused factories, warehouses, and similar structures that originally served industrial and storage functions. With urban development and industrial restructuring, these buildings have become highly adaptable resources for reuse. Phase I of the Shuanglongshan Art District was developed with an investment of CNY 1 million and covers approximately 1700 m²; Phase II is planned at CNY 4 million for around 13,500 m². By 2024, the district had expanded to 45,500 m². Its functional layout is now clearly defined: Buildings 3, 4, 53, and 54 concentrate approximately 30 artist studios that provide ample creative space, while Building 5 houses large exhibition halls with a total display area of about 1500 m² suitable for exhibitions of varying scales. Four art-education studios are also distributed across the site. The expansive, high-clearance warehouse spaces are ideally suited for storing tools, materials, and large-scale artworks. This abundance of adaptable, low-cost space has proved crucial in attracting additional art institutions, studios, independent artists, and enthusiasts. As verified in December 2024, the district spans 45,500 m², accommodates 30 studios, and has maintained essentially unchanged rents from 2020 to 2025.

5.2. Talent Drive

Zhuhai has few large-scale art districts and a relatively small pool of full-time professional artists, making university-affiliated academy artists particularly central. These artists draw on institutional resources and academic environments, serving not only as transmitters of artistic knowledge but also as the primary force behind local art production, theoretical research, and interdisciplinary integration.

The city hosts campuses of numerous universities, including Sun Yat-sen University, Jinan University, Beijing Normal University (BNU), Beijing Institute of Technology (BIT), Hong Kong Baptist University United International College, Zhuhai College of Science and Technology, Zhuhai Art College, and Guangdong Polytechnic College.

Art-related programmes in Zhuhai are offered by BNU, BIT, Hong Kong Baptist University United International College, Zhuhai College of Science and Technology, Zhuhai Art College, and Guangdong Polytechnic College. Shuanglongshan Art District lies 8.2 km from BNU Zhuhai, 9.3 km from BIT Zhuhai, and 16.5 km from Hong Kong Baptist University United International College, all reachable within a 30-minute drive.

Between 2020 and 2024, the studio of initiator Wang Fugang alone generated 6 cross-campus workshops, 5 public lectures, and 12 collaborative exhibitions, involving more than 60 faculty participants and yielding over 30 symbolic outputs in the form of short films, cultural-creative intellectual property, and related artefacts. From 2020 to 2025, the district hosted a total of 28 cross-university workshops and joint exhibitions, with cumulative faculty participation reaching approximately 140 person-times. This deep university-anchoring mechanism, characterised by sustained academic orientation and knowledge spillover that sharply contrasts with the commercialised trajectory of Beijing 798, constitutes the fundamental reason why virtually no artist displacement has occurred to date ^[22].

5.3. Market Drive

The Market Drive embeds symbolic production into the daily experiential cultural consumption of Zhuhai's middle class. In the incipient phase of the Shuanglongshan Art District, it served as an essential venue for artists' daily creation, cultural exchange, exhibitions, and educational training. Over time, the volume of visitors and participants steadily increased. The subsequent inclusion of numerous faculty members from institutions like Beijing Normal University and Beijing Institute of Technology injected a vital source of energy into the art district. This collective agglomeration formed a "creative reactor", where the convergence of artists allowed diverse artistic ideas to collide, sparking innovation. Furthermore, the artists' social influence and professional networks have garnered greater social attention for the art district, attracting people from various sectors to visit, settle, or collaborate through social media, academic networks, and other channels. Since 2020, the art district has annually hosted Chinese New Year couplet writing events and organized artists to display their works in commercial centers. Through a "cre-

ation-exhibition-consumption” micro-cycle, the art district achieves a closed loop from knowledge spillover to economic value, laying the foundation for sustainable development.

5.4. Cultural Conflict as a Driving Force

The Shuanglongshan Art District is located within the Zhuhai–Macao 30-minute living circle, with 17% of resident artists having Hong Kong/Macao backgrounds and 45% being affiliated with universities. This naturally

establishes the district as a frontier field for cultural exchange within the Guangdong–Hong Kong–Macao Greater Bay Area. Since its spontaneous formation in 2019, the park has proactively hosted exhibitions for non-resident artists, such as the “Ink Attack” and the “Zhuhai Primary and Secondary School Teachers Pastel Art Exhibition,” thereby breaking down artistic boundaries between the inside and outside of the park, and between the mainland and Hong Kong/Macao. This has led to continuous coverage by mainstream media outlets, including People’s Daily Online and Overseas Network (**Figure 4**).



Figure 4. Zhuhai Primary and Secondary School Teachers Pastel Art Exhibition.

Note: Sponsor: Zhuhai Municipal Education Bureau; Organizers: Zhuhai Xiangzhou District Education Bureau Zhuhai Xiangzhou District Federation of Literary and Art Circles; Co-Sponsors: Wei Hong Fine Arts Master Studio, Zhuhai Zhuhai Xiangzhou District Artists Association, Zhuhai Xiangzhou District Artists Association Pastel Painting Society Zhuhai Xiangzhou District Art Teachers Association.

This creative and consumption ecosystem, dominated by university faculty and students and deeply involving Hong Kong/Macao artists, demonstrates a strong tendency toward academic exploration, aesthetic experimentation, and cross-border dialogue, forming a characteristic cultural atmosphere of high inclusiveness and low commercial expectation(See **Table 2**).

It is this university-driven inclusiveness, fueled by Guangdong–Hong Kong–Macao exchange, that creates the core cultural conflict and anti-gentrification barrier against the commercial gentrification logic of external real estate capital seeking high rental returns: On the one hand, the core demand of university faculty, students, and Hong Kong / Macao artists for the space is creative freedom and cultural dialogue, not investment returns. This lack of demand for investment returns reduces the landlord’s justification for substantial rent increases, resulting in rents

remaining largely at the original price between 2020 and 2025. On the other hand, the frequent Zhuhai-Macao cultural exchange activities and the academic reputation of the university faculty jointly form a cultural wall, significantly raising the public opinion and policy threshold for commercial capital entry. This causes capital to voluntarily retreat due to the difficulty of rapid short-term monetization. Under the long-term tension of this cultural conflict, the Shuanglongshan Art District has been able to maintain a highly original state as of 2025, becoming one of the few large art communities in China that has not yet entered the stage of capital invasion and artist displacement. It provides a replicable path of using university inclusiveness to counteract commercial gentrification for post-industrial spaces within the Greater Bay Area and global cross-border cultural exchange contexts ^[23].

Table 2. The Three Core Driving Forces behind the Formation of Shuanglongshan Art District.

Driving Force	Core Mechanism	Key Data	Core Effect
Spatial Drive	Low-cost malleable industrial legacy spaces	45,500 m ² ; 30 studios; 1500 m ² exhibition; rent unchanged	Large spaces + stable rent → spontaneous vibrant community
Talent Drive	Deep university anchoring	≤30 min to 6 universities; 28 joint events; >140 faculty	Academic orientation + knowledge spill-over; almost no artist displacement
Market Drive	Middle-class experiential micro-consumption	Annual public events + faculty networks	Soft “create–show–consume” loop; sustainable without commercial takeover
Cultural Conflict Drive	Inclusive cross-border academia vs. capital logic	17% HK / Macao artists; frequent cross-border exhibitions	Removes rent-hike legitimacy + reputational barrier; capital retreats

6. Discussion

The key to the Shuanglongshan Art District maintaining its highly authentic state in 2025 lies in the mutual reinforcement of the four major drivers—“Space, Talent, Market, and Cultural Conflicts”—which collectively block the capital intrusion and artist displacement phases of the classic gentrification cycle. However, this advantage is not perpetual, and its future sustainability faces multiple challenges that require careful consideration.

Firstly, the industry structure remains skewed toward traditional forms, with painting, calligraphy, sculpture, and independent film dominating, and a relatively low proportion of young digital native creators. If new media are not introduced appropriately, the park may face a decline in creative vitality within 5 to 10 years. It is recommended to leverage existing resources from the Macau University of Science and Technology and Beijing Normal University Zhuhai, and renovate some exhibition halls into AR/VR experience spaces to encourage cross-disciplinary digital projects. Crucially, this must adhere to the principle of technology serving art rather than being capital-driven, avoiding the over-commercialization pitfalls seen in places like Shenzhen OCT-LOFT^[24].

Secondly, while a spontaneous network of industry-academia-research (IAR) collaboration has formed, it remains highly dependent on individual enthusiasm and has not been fully institutionalized. Knowledge spillover could face a precipitous drop should core initiators or key faculty members retire. It is recommended to swiftly advance two low-cost mechanisms: first, a joint annual resident-artist incubation micro-fund of CNY 500,000–

1,000,000 established by the three universities; and second, the formal recognition of the park as a practical teaching base, fixedly accepting 80–100 students annually for course credit. This will transform spontaneous overflow into a long-term institutional guarantee.

Thirdly, cultural and creative industrialization has achieved initial success, with the “Shuanglongshan: Industrial Memory” series, developed from the original production lines in Buildings 55–57, realizing stable profitability. However, the scale remains small, and caution is needed to prevent the pursuit of sales figures from compromising originality. It is suggested that cultural and creative revenue be capped at 30% of the park’s total expenditure, ensuring creation remains the core focus. Concurrently, efforts should continue to delve into Lingnan cultural IP, but this must be predicated on artists’ voluntary participation, avoiding forced industrialization^[25,26].

Finally, the social aesthetic education function is steadily expanding, already covering community parenting, kindergarten curricula, and parts of the Hong Kong and Macau exchange activities, fully embodying the contemporary practice of Cai Yuanpei’s philosophy of aesthetic education replacing religion. In the future, this can be further expanded through collaborative mobile aesthetic education classrooms with the Macau Art Museum. However, professional depth must be maintained, avoiding its generalization into ordinary charitable activities. The expansion of aesthetic education’s reach should not be at the expense of diluting the park’s academic atmosphere.

In summary, the core of the “Zhuhai Model” lies in using academic institutions’ inclusiveness to suppress the logic of commercial gentrification. By maintaining the bot-

tom line of low commercial expectations, strengthening institutionalized IAR collaboration, and carefully managing cultural and creative industrialization, gentle, sustainable growth can be achieved while preserving originality. This offers a truly replicable anti-gentrification regeneration pathway for post-industrial spaces situated in global small cities and cross-border cultural intersections^[27].

7. Conclusions

Through a deep case analysis of the Shuanglongshan Art District in Zhuhai, this paper, for the first time, reveals a globally rare anti-gentrification pathway for cultural regeneration in post-industrial spaces within small and medium-sized cities. Relying on the four endogenous drivers—Space, Talent, Market, and Cultural Conflicts—the art district has formed a tight symbiosis among universities, artists, and the old industrial space. With deep university anchoring as the core, knowledge spillover as the intermediary, and symbolic production as the engine, it has successfully blocked the capital intrusion and artist displacement phases of the classic gentrification cycle, achieving a structural leap from vacant warehouses to a diversified, authentic art platform. The most powerful empirical evidence is that rents have fundamentally remained unchanged from 2020 to 2025, with zero artist displacement. This result stands in stark contrast to the eventual commercialization or eviction fate of venues like Beijing’s 798, Shenzhen’s OCT-LOFT, and New York’s SoHo.

The primary theoretical contribution of this paper is the proposal and empirical validation of a cultural regeneration model for post-industrial spaces. It is the first to establish university anchoring as a critical institutional variable for small and medium-sized cities to resist gentrification, and to explicitly identify knowledge spillover and symbolic production as anti-gentrification mediating mechanisms. This work localizes and extends Bell’s knowledge economy theory and Florida’s 3T framework into a dynamic model incorporating 3T plus policy embedding plus university anchoring. It distills the “Zhuhai Model”—characterized by high organic quality, low state intervention, and a hybrid academic and creative economy^[28]. Although the research is primarily based on a single in-depth case, with quantitative dimensions still needing further exploration,

the Shuanglongshan Art District offers a globally invaluable counter-example: an authentic art community that remains unconsumed by capital in 2025. Its significance lies not only in providing a directly replicable, gentle regeneration paradigm for China’s vast number of small and medium-sized cities but also in proving, at both theoretical and practical levels, that deep university anchoring can serve as an operational institutional device to disrupt the gentrification fate, thus contributing a “Chinese Solution” to post-industrial cities worldwide still searching for the answer to “how to save art districts from being consumed by capital.”

Author Contributions

Conceptualization, validation, formal analysis, investigation, writing—original draft preparation, Z.L.; methodology, software, data curation, writing—review and editing, supervision, project administration, Y.Z. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare no conflicts of interest.

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