

From Absorbing Idleness to Preventing Functional Regression: The Shift in the Problem of Post-Event Venue Utilization under the Stock-Renovation Model

Zhi-An Wu

Sport Art College, Guangzhou Sport University, Guangzhou, Guangdong, China

Abstract: *The 15th National Games of China were staged without constructing new large venues, with more than 90% of competition venues delivered through the renovation and upgrading of existing facilities. This marks a shift in venue supply from incremental new construction to stock renovation. Existing research on post-event venue utilization treats idleness as the core problem, resting on three presuppositions: that venues are newly added facilities, that the risk is visible and discrete, and that the remedy lies in finding uses. This article terms this the incremental paradigm. Under stock renovation all three presuppositions fail: venues are already embedded in the urban public service network before the event and will not stand idle afterwards. What may instead decline is the elevated functional level produced by renovation, eroded by operating costs, policy support and operating capability. This article terms this functional regression. Its root cause is the rupture between the construction logic of renovation and the operating logic of maintenance, entrenched by the construction-phase bias of support policy. Four types are distinguished: policy-discontinuity, cost-squeeze, demand-mismatch and capability-loss regression. Current evaluation, built around opening hours and visitor numbers, cannot measure the standard at which venues operate. The article proposes functional retention as a reconstructed evaluation dimension.*

Keywords: Sports venues, Post-event utilization, Functional regression, Stock renovation, 15th National Games of China, Event legacy.

1. Introduction

From 9 to 21 November 2025, the 15th National Games of China—the country's largest domestic multi-sport event, held every four years—took place across Guangdong Province, Hong Kong and Macao, with competitions distributed among 19 cities of the Guangdong–Hong Kong–Macao Greater Bay Area [1]. Compared with previous editions, the most notable feature of these Games lay not in their scale but in the mode of venue supply. The organizing committee explicitly committed itself to avoiding duplicated construction, building no new large venues and no new athletes' village; in the Guangdong competition zone, more than 90% of competition venues were delivered through the renovation and upgrading of existing facilities [1]. Only five venues were newly built, and a further 22 were shared between the National Games and the National Games for Persons with Disabilities and Special Olympic Games [2]. This was the edition with the fewest newly built venues in the history of the National Games.

Such a choice is ordinarily read as a cost-control measure consistent with the principle of thrift in event hosting. Placed within the research literature on post-event venue utilization, however, its significance extends considerably further: it alters the very nature of the post-event problem.

For a long time, the central concern of research on post-event venue utilization has been idleness. This concern rests on a solid empirical foundation. From Montreal to Athens, from Sydney to Cape Town, venues that fell into prolonged vacancy after the event—costly to maintain yet scarcely used—constitute the most conspicuous category of cases in event legacy research, and the white elephant has become the field's most widely circulated metaphor [3]. Around the problem of idleness, scholarship has developed a coherent set

of analytical instruments: utilization rates, opening days and annual event counts to measure the degree of use; sunk costs and maintenance expenditure to quantify the scale of waste; and diversified operation, outsourcing of operating rights and functional conversion as the principal directions of remedy.

Yet the applicability of these instruments rests on an unstated premise: that the venue is newly built, and that a use must be found for it after the event. When more than 90% of venues are pre-existing facilities that have operated in the city for years and that return to their prior trajectory of use once the event ends, idleness as a problem form scarcely arises. They were used before the event, and they continue to be used afterwards.

Does it follow that venues under the stock-renovation model face no post-event risk? This article argues that they do, but that the form of the risk has been displaced. The substance of renovation investment is a one-off elevation of the functional level of an existing venue: spatial quality, facility grade, degree of digital enablement and capacity to host activities are all raised to a level not previously attained. The real post-event risk is that this elevated functional level gradually decays under the combined constraints of operating costs, policy support and operating capability, falling back towards a state close to that before renovation. The venue remains open and footfall persists, but competition-standard surfaces are used in a downgraded manner, smart systems are shut down, parts of the building are closed off, and the capability purchased by the renovation investment is silently written off. This article terms the phenomenon functional regression.

From this follows the central proposition of the article. As the hosting model shifts from incremental new construction to stock renovation, the core problem of post-event utilization

has shifted from how to absorb idleness to how to prevent functional regression; and the existing research framework, owing to its incremental presuppositions, lacks the capacity to identify the latter class of risk. The article argues this shift step by step, analyses the generative mechanism of functional regression, and proposes corresponding approaches to evaluation and governance.

The nature of the study and its materials require clarification. This is a work of conceptual analysis and framework reflection rather than empirical testing; it proceeds through conceptual analysis and logical argument. Three categories of material are drawn upon: publicly released information on event hosting and venue renovation; the texts of current policies supporting sports venue operation; and published Chinese and international research on event legacy and venue operation. The article does not claim that functional regression has already occurred, or to what extent—that awaits dedicated empirical investigation. What it does claim is that this risk form exists logically, that the institutional conditions for its emergence are present, and that current research frameworks and evaluation instruments are unable to identify it.

2. The Incremental Paradigm: The Problem Framework of Existing Research and Its Presuppositions

2.1 The White Elephant Metaphor and the Establishment of Idleness as the Core Problem

The classic formulation of the venue problem derives from an accumulation of failure cases. Cashman's reflection on the Sydney 2000 Olympic Games was framed as a bitter-sweet awakening [4]; Searle, under the title of an uncertain legacy, dissected the post-Games predicament of Sydney's Olympic stadiums [5]; Alm and colleagues characterized the governance difficulty of major event venues directly as the taming of white elephants [3]; and Drummond and Cronje's analysis of the Cape Town Stadium revealed how event-driven venue construction turns into a long-term burden on local finances in the absence of subsequent demand [6].

These studies share a highly consistent narrative structure: the scale and degree of specialization required by the event far exceed local everyday demand; demand falls away sharply once the event ends; facilities therefore stand idle; and maintenance expenditure becomes a fiscal burden. Preuss's legacy cube framework defines event legacy along three axes—tangible and intangible, positive and negative, planned and unplanned [7,8]—and the idle venue is the archetypal form of unplanned negative tangible legacy.

The empirical sources of this narrative can be traced further back. Debt repayment for the 1976 Montreal Olympic Games extended over three decades, and several venues of the 2004 Athens Olympic Games fell into dereliction within a few years of the event; together they shaped the basic public and scholarly image of major event venues [9]. Subsequently, the main stadium of the London 2012 Olympic Games underwent seat reduction and functional conversion after the Games [10], widely regarded as a direct response to this lesson. Its logic, however, remained a solution sought within the incremental

framework: since newly built capacity is destined to be excessive, the possibility of reduction should be reserved at the design stage. It is worth noting that this approach confirms the incremental presupposition rather than breaking with it.

Chinese research has largely inherited this problem consciousness. After the Beijing 2008 Olympic Games, studies of the post-Games operation of Olympic venues proliferated; subsequent research on venue utilization after successive editions of the National Games, the National Youth Games and the Military World Games has formed a stable genre [15–18]. Chen and colleagues note that venues place excessive emphasis on event requirements at the preliminary design and construction stages while neglecting long-term development considerations, necessitating large-scale rectification afterwards [11]. Zeng and colleagues, and Yang, observe that, constrained by spatial planning and management systems, the actual post-event utilization of large comprehensive venues has long been difficult, with persistent tension between high investment and low return and between economic and social benefit [12,13]. Leng explains the relatively high utilization rate of Salt Lake City Winter Olympic venues along four dimensions: construction type, diversified investment, management model and multifunctional development [14].

2.2 Three Presuppositions

Although these studies differ in their specific conclusions, they share three presuppositions in the framing of the problem.

The first presupposition is that the object of study is a newly added facility. The venue is taken by default to have been built for the event, its very existence generated by event demand. This presupposition dictates that the starting point of analysis must trace back to construction decisions—whether the site was appropriate, whether the scale was excessive, whether the possibility of post-event conversion was reserved. All such questions take as their implicit premise that the venue is new and might not have been built, or might have been built differently.

The second presupposition is that the risk is visible and discrete. Idleness as a state possesses clear observability: whether a venue is open, how many events it hosts in a year, how many visits it receives, are all countable, comparable and rankable. It is for this reason that the utilization rate has become the most common dependent variable in post-event utilization research, and the idleness rate a direct measure of the severity of the problem.

The third presupposition is that the direction of remedy is to find uses. Since the problem is taken to be that facilities cannot find matching demand, the solution naturally lies in expanding demand or lowering thresholds—diversified operation, outsourcing of operating rights, functional conversion, and free or low-charge opening [19–21]. However different in path, these remedies point in a single direction: to get empty venues used.

2.3 The Boundaries of the Presuppositions

These three presuppositions support one another and

constitute a self-consistent analytical paradigm, which this article terms the incremental paradigm. It must be emphasized that identifying the presuppositions is not to deny their value. In the incremental context this framework is not only valid but necessary: it accurately depicts the genuine predicament facing large newly built venues, and the remedies it proposes have demonstrable effect.

The difficulty is that the validity of the presuppositions depends on particular empirical conditions, while analytical frameworks tend, through scholarly inertia, to persist into contexts in which those conditions have changed. When the hosting model undergoes structural transformation, continuing to pose questions within the incremental paradigm means that researchers will see only what the framework permits them to see. Idleness has not appeared; the problem is therefore judged to have been solved; and the risk that is actually unfolding is systematically overlooked because it falls outside the field of vision of the framework.

3. The Stock Turn: The Hosting Model of the 15th National Games and Its Challenge to the Presuppositions

3.1 The Basic Form of the Stock-Renovation Model

Venue supply in the Guangdong competition zone of the 15th National Games took a form markedly different from the incremental model. Three representative venues illustrate the point.

The Guangdong Olympic Sports Center served as the main venue for the opening and closing ceremonies and for athletics, and was also the country's first upgrading and renovation project for an 80,000-seat stadium. Completed for the 9th National Games in 2001, the venue was renovated by a team led by Academician He Jingtang of the Chinese Academy of Engineering [1]. The works covered 346,000 square meters of outdoor renovation, added a new event operations command center, and comprehensively upgraded accessibility and smart facilities [22]. Of particular note, the renovation removed the glass curtain wall that had enclosed the second-floor space, converting it into an open area containing an 800-meter loop track, which served during the Games as a spectator evacuation platform and was converted afterwards into a space for public fitness activities [22]. The designers explicitly stated the aim of building a "people's sports park" [1].

The Foshan Shunde Desheng Sports Center presents a slightly different case. It filled a gap in large cultural and sports facilities in the Shunde new district and, during construction, introduced high-specification equipment including a large center-hung screen, enabling the venue to host non-sporting activities such as concerts and e-sports competitions. The Guangdong Provincial People's Stadium represents yet another type: this historic venue, after refurbishment, reshaped the city's landscape axis and was fitted with an adjoining Guangdong Sports Museum, which opened formally on 3 November 2025 [22].

Comparable elevation is visible at other venues. The Shenzhen Sports Center, first built in 1985 as one of the eight

major cultural facilities of 1980s Shenzhen, reached a spectator capacity of 45,000 after its 2025 renovation, adopting a fully enclosing tiered stand design in which the front row sits only nine meters from the field of play, together with intelligent temperature control and three-dimensional drainage systems [23]. Parallel progress is evident at the regional level: through building specialized venues and sports parks, renovating public spaces and opening school facilities, Huizhou raised local sports floor area per capita to 3.19 square meters [22].

The three cases point to a single logic. The objective of renovation was not to make venues capable of hosting the event, but to raise their functional level systematically by one order while hosting it. The open track platform, the center-hung screen and the museum were not necessities for the event itself; their value lies precisely in the post-event period.

3.2 The Point-by-Point Failure of the Three Presuppositions

Placing the three presuppositions of the incremental paradigm in this context reveals clearly the process of their failure.

The first presupposition fails because the nature of the object has changed. Renovated venues were not born of the event. They had already operated for years before it, with a stable body of users, an existing operating organization and a relatively mature service system. Asking whether the site was appropriate or the scale excessive has here lost its meaning: the venue was already there, and the event merely afforded it an opportunity for upgrading. The starting point of analysis must therefore move from construction decisions to renovation decisions and to the absorption of operating burdens.

The second presupposition fails because the form of risk has changed. Renovated venues will not stand idle after the event, since they are already embedded in the city's existing public service network, and the full opening of all venues to the public after the Games was itself a settled arrangement [22]. Measured by utilization or idleness rates, such venues will almost inevitably perform well. Yet this is precisely the problem: a venue performing well on existing indicators may be silently losing the functional level created by its renovation, and current measures are wholly insensitive to this.

The third presupposition fails because the direction of remedy is misaligned. The logic of finding uses presupposes excess supply and insufficient demand. Renovated venues typically face the opposite structure: demand exists and may even be strong, while what is scarce are the resources and capabilities required to sustain high-standard provision. Continuing to apply remedies of introducing more activities and expanding opening not only fails to resolve the problem but may aggravate the loss: where maintenance capability has not risen in step, greater intensity of use merely accelerates depreciation of the facilities.

3.3 A New Form of Risk

There thus emerges a risk that the incremental paradigm has

left unnamed. It manifests not as vacancy but as downgrading; it occurs not at a single post-event moment but as a gradual process spanning several years; it is evidenced not by the disappearance of facilities but by the silent atrophy of their capability.

Concretely, a venue that has undergone high-standard renovation may exhibit the following conditions after the event. Playing surfaces meeting international competition standards are used over the long term for ordinary public fitness, their professional performance neither called upon nor spared from depreciation. Lighting and sound systems configured for event broadcasting stand unused or are switched off in everyday operation because their running costs are high. Smart management systems gradually fail for want of specialist maintenance personnel and annual service fees. Commercial space and ancillary rooms added by the renovation stand vacant and closed off for want of tenancing capability. Open fitness platforms have their opening hours reduced because cleaning and security costs exceed budget.

What these conditions share is that the venue as a whole continues to operate and all routine indicators continue to be met, while the portion of capability purchased by the renovation investment is returning, piece by piece, to its point of origin. This is what this article terms functional regression.

4. The Generative Mechanism and Typology of Functional Regression

4.1 Generative Mechanism: The Mismatch between Functional Elevation and Operational Absorption

The root cause of functional regression lies in the rupture, in resource logic, between event renovation and everyday operation.

Event renovation is a one-off, concentrated and clearly targeted engineering act. Its funding derives largely from dedicated construction appropriations or one-time arrangements in local public finance; the intensity of investment is determined by working backwards from event standards and is almost unconstrained by the venue's everyday balance of revenue and expenditure. Operation and maintenance after renovation, by contrast, is a continuous, dispersed, annually recurring category of expenditure. Its funding derives from routine operating budgets and the venue's own commercial income, and the intensity of investment is constrained by the venue's capacity to balance its books.

Between the two lies a transmission relationship that is easily overlooked: elevating the functional level simultaneously raises the baseline of operating costs. Higher spatial quality means a larger area to clean and secure; more advanced facilities mean higher energy consumption and maintenance expenditure; smart systems, while delivering managerial efficiency, also entail continuing software service and staffing costs. The enumeration of the scope of venue operating expenditure in current subsidy policy corroborates this structure: routine maintenance, energy costs, equipment renewal and information services constitute the bulk of recurrent expenditure [24], and these are precisely what the

various forms of post-renovation elevation act upon most directly. Existing research likewise notes that rapid change in the policy and funding environment has made venue management increasingly complex, thereby affecting post-event operating performance [25].

This transmission has two characteristics: irreversibility and rigidity. Irreversibility means that once function has been elevated it is difficult to retract selectively. Once an open fitness platform is built, it must be cleaned and secured in its entirety; one cannot maintain only half of it. Once a smart system is deployed, its servers, network and data services constitute an indivisible minimum running cost. Rigidity means that this portion of cost bears little relation to volume of use: whether one hundred or one thousand visitors arrive on a given day, the energy baseline, maintenance cycle and staffing configuration remain broadly unchanged. The combined effect is that the upward movement of operating costs is certain, while the matching growth in revenue is not.

A structural contradiction thus arises. Renovation is governed by construction logic, operation by operating logic; the former need not consider the bearing capacity of the latter, yet the latter must pay for the consequences of the former. Where the magnitude of elevation exceeds the capacity for operational absorption, regression is all but inevitable—not because managers are unwilling to sustain the standard, but because, under a given budget constraint, downgraded use is the only feasible response.

4.2 Institutional Causes: The Construction-Phase Bias of the Support Structure

That this contradiction is difficult to resolve of itself relates directly to structural features of China's policy support for sports venue operation.

First, the designated uses of subsidy funds explicitly exclude functional maintenance. The Measures for the Administration of Subsidy Funds for Public Sports Venues Open to the Public Free of Charge or at Low Charge, issued by the Ministry of Finance and the General Administration of Sport in 2022, provide that subsidy funds are to be used for the staging of public-benefit sporting events, public-benefit sports training, routine venue maintenance, energy costs, equipment renewal, information services and other improvements to the operating environment, while expressly prohibiting their use for capital construction and major repair or renovation [24]. In an incremental context this provision has its rationale — preventing the conflation of construction and operating funds. Under stock renovation, however, it severs precisely the most critical link: the periodic overhaul and systematic renewal of the high-standard facilities created by renovation fall within the excluded categories of expenditure. Routine maintenance can cover cleaning and minor repairs, but not the wholesale replacement of an event-grade lighting system five years on.

Second, subsidy resources display a tendency towards downward extension and dilution. The 2022 Measures changed the scope of subsidy from large sports venues under sports departments [26] to public sports venues and public fitness centers at county level and above that meet the requirements of the service specification, simultaneously

repealing the original 2014 Measures [27]. In terms of universality this adjustment is unquestionably progress, but its consequence is a rapid expansion of coverage. From 2021 to 2023, central subsidy funds amounted to RMB 930 million, RMB 1.08 billion and RMB 1.18 billion respectively, while the number of venues brought within the scope of subsidy rose from 1340 to 2180 and then to 2491 [28]. Total funding grew by roughly 27% while the number of subsidized venues grew by roughly 86%, so that the average subsidy available per venue fell from about RMB 690,000 to about RMB 470,000. For event venues that have just completed large-scale renovation, with a markedly higher baseline of operating costs, this change means that the relative intensity of external support has fallen rather than risen.

Third, support channels carry a threshold of institutional affiliation. The original 2014 Measures confined eligibility to large sports venues under sports departments [26]; while the 2022 Measures broadened the range of venue types and administrative levels, they still take affiliation to sports administration departments as a precondition [24]. This means that venues managed by state-asset authorities after

restructuring, or operated by social forces, may be unable to enter the scope of support on grounds of institutional affiliation, even where their physical condition and degree of opening meet the requirements. Yet the introduction of market-oriented operating entities and changes of management system following the renovation of event venues is precisely the prevailing trend of recent years: the more market-oriented the mode of operation, the more likely exclusion from the public support system.

Taken together, these three features constitute a construction-phase bias in the support structure. Institutions provide high-intensity investment at the venue construction and renovation stages, yet leave a conspicuous gap in support at the stage of functional maintenance. It is within this gap that functional regression quietly occurs.

4.3 Four Types of Functional Regression

According to differences in the dominant cause, functional regression can be differentiated into four types, whose identifying features and critical points of intervention differ.

Table 1: Four types of functional regression and their features.

Type	Dominant cause	Typical manifestation	Critical point of intervention
Policy-discontinuity regression	Temporary event support mechanism dissolved; routine support system not yet in place	Functions added by renovation are rapidly suspended within 1–2 years of the event, mainly because approval, ownership or funding channels remain unresolved	Event closure period
Cost-squeeze regression	Baseline of operating costs shifts upward while operating revenue does not grow in step	Deliberate lowering of operating standards: reduced air-conditioning and lighting hours, extended maintenance cycles, manual labor substituted for smart systems	Renovation decision stage and annual budgeting
Demand-mismatch regression	Structural divergence between functions created by renovation and actual local demand	Facilities intact but level of use continues to descend; high-specification surfaces used at a low level over the long term	Renovation scheme review stage
Capability-loss regression	Event operating team dissolved; the everyday operating organization lacks capability to run the newly added facilities	Facilities intact and demand present, yet idle because no one knows how, or dares, to use them	Event closure and team handover period

Policy-discontinuity regression originates in the abrupt contraction of the support system after the event. During event preparation, venues obtain dedicated inter-agency coordination, earmarked funds and policy facilitation; once the event ends, this temporary support mechanism is dissolved while the routine support system has yet to take over. Its typical manifestation is the rapid suspension of functions newly added by renovation within one to two years of the event, with suspension attributable mainly to unresolved questions of approval, ownership or funding channel rather than to insufficient demand.

Cost-squeeze regression originates in the gap between an upward shift in the baseline of operating costs and the failure of operating revenue to grow in step. Its typical manifestation is a venue's deliberate lowering of operating standards in order to compress expenditure—reducing the hours of air-conditioning and lighting, extending equipment maintenance cycles, substituting manual labor for smart systems. This type of regression is the most concealed, because each step of contraction is managerially rational.

Demand-mismatch regression originates in a structural divergence between the functions created by renovation and actual local demand. Event-standard playing conditions are not necessary in mass fitness settings; where the surrounding area lacks the competition, entertainment or training demand

capable of absorbing high-standard use, high-specification facilities remain in a state of low-level use over the long term. Its typical manifestation is intact facilities accompanied by a continuing descent in the level of use.

Capability-loss regression originates in the rupture of operating capability between the event period and afterwards. During the event, venues are typically run by intensive, multi-agency temporary teams; once the event ends the team is dissolved and everyday operation reverts to the original organization, which may not possess the professional capability to operate the newly added facilities. Its typical manifestation is facilities intact and demand present, yet idle because no one knows how, or dares, to use them.

4.4 The Blind Spot of the Current Evaluation System

That functional regression has long gone unrecognized as a distinct problem relates directly to the indicator design of the current evaluation system.

The prevailing evaluation of opening services at public sports venues centers on such dimensions as opening hours, the number of playing areas opened, fitness visits received, the number of public-benefit sporting events staged and the conduct of sports training. The quantitative requirements are set by the Specification for Basic Public Services of Public

Sports Venues [30], while the evaluation procedure is elaborated in the accompanying evaluation guidelines [29]. The design intent of this indicator set is entirely clear: to ensure that venues fulfil their opening obligations and to prevent any reduction of opening hours, reduction of opened areas or lowering of service standards. As a defense against idleness, it is effective.

Its underlying logic, however, remains quantity-oriented. It answers whether a venue is open, for how long and with how many visitors, but not the standard at which it is open. A renovated venue that has downgraded championship-grade playing surfaces to ordinary fitness areas, shut down its smart systems and closed off its commercial space may meet every one of these indicators in full, and may even perform better on visits received precisely because thresholds of use have been lowered. The evaluation system is not merely unable to identify functional regression; in certain circumstances it may incentivize it. Where assessment pressure is concentrated on visits and event counts, compressing unit service costs and raising throughput becomes the rational choice—and this is exactly the behavioral logic of cost-squeeze regression.

The formation of this quantity orientation had its historical rationale. When the subsidy system was designed, the principal problem was that large numbers of venues remained closed or barely open on various pretexts; anchoring assessment to opening hours and visits received was therefore an effective response to the problem of the time, and the relevant management requirements of 2024 continue to place emphasis on resolutely preventing any reduction of opening hours, reduction of opened areas or lowering of service standards [31]. Yet the phrase “lowering of service standards” refers principally to shortfalls at the level of opening conditions, not to the decay of the higher-order functions created by renovation; the two are not equivalent in governance terms.

Considered further, this blind spot is not an oversight of indicator design but a consequence of institutional positioning. The evaluation guidelines were formulated pursuant to the provision of the subsidy administration measures concerning comprehensive annual evaluation of venue opening services, and evaluation results must be entered in a standard form and published annually on the National Public Fitness Information Service Platform [29]. The functional positioning of the guidelines is therefore that of an ancillary verification instrument for the allocation and use of subsidy funds: what they must answer is whether public money has purchased corresponding opening services, not whether the functional level created by renovation has been maintained. The latter lies neither within their legislative purpose nor within the range of their data collection.

In other words, the current evaluation system was tailored to the problem of idleness in an incremental context. It measures whether a venue is used, not the degree or the standard of that use. Under stock renovation the consequences of this blind spot are particularly serious, because the value of renovation investment resides precisely in standard rather than in quantity.

5. From Idleness Rate to Functional Retention: A Shift in Evaluation and Governance

5.1 Reconstructing the Dimensions of Evaluation

Identifying functional regression requires the introduction, alongside existing quantitative indicators, of qualitative indicators centered on functional retention. The basic approach is to take the functional level at the completion of renovation as the benchmark and to measure the actual state of retention in each subsequent year.

Four directions of observation may be considered. Facility performance retention concerns whether key facilities such as event-grade playing surfaces, lighting and sound systems and floor materials remain within acceptance standards, which can be confirmed through periodic technical inspection. System operation retention concerns the actual activation rate and functional completeness of smart management, energy monitoring, ticketing and reservation systems. Spatial use retention concerns the proportion of floor area actually in use among the open platforms, commercial spaces and ancillary rooms added by renovation. Use-level retention concerns the proportion of activities held at the venue that meet the corresponding professional standards.

What these four categories share is the substitution of benchmark comparison for absolute quantity. Their significance lies not in judging venues good or bad but in rendering an otherwise invisible process of decay observable. Only when regression can be measured does it become possible to intervene.

Two operational points warrant attention. First, the benchmark should be established on the basis of the technical documentation of renovation completion and acceptance rather than on subjective impression or horizontal comparison with similar venues; otherwise retention loses its objective reference. Second, the frequency of measurement should not be excessive. Functional regression is a gradual process measured in years, and an annual assessment suffices to capture the trend; overly frequent inspection would instead translate into an administrative burden on venues, contrary to the governance direction of burden reduction.

5.2 Adjusting the Approach to Governance

Correspondingly, the focus of governance must move forward from finding uses after the event to the renovation decision stage, and extend into the operating stage.

At the renovation decision stage, ex ante assessment of operating costs should be introduced. Deliberation on renovation schemes should not confine itself to demonstrating event suitability but should also calculate the annual increment in operating costs following completion and identify the source of funds to meet it. Where there is no stable channel to absorb the incremental cost, the corresponding functional elevation should be set with caution: a function that cannot be sustained may have lower long-term value than one not built at all.

At the operating stage, a support mechanism matched to functional maintenance is required. This does not necessarily mean increasing the total volume of subsidy. A more realistic path is to establish, within the existing framework and drawing on the arrangements already in place for building the public fitness service system [32], transitional provisions for renovated major event venues that allow periodic overhaul and system renewal to enter the scope of support, and that moderately open up the application threshold created by institutional affiliation.

As regards continuity of capability, the consolidation of knowledge held by event operating teams should be made a mandatory element of event closure. Through the handover of operating procedures, the retention of key personnel and dedicated training, the probability of capability-loss regression can be reduced.

6. Conclusions

The judgment advanced in this article is that the transformation of the hosting model changes not only the provenance of venues but the form of post-event risk. When more than 90% of venues derive from renovation, idleness as a classic problem has to a large extent been circumvented, while functional regression emerges as a problem that is more concealed, more gradual and harder for current indicators to capture.

The demands this shift places on research are twofold. On the one hand, the validity of the incremental paradigm within its proper context must be acknowledged. On the other, it must be recognized that when empirical conditions change, continuing to pose questions within the old framework will yield the answers the framework permits rather than what is actually occurring in reality. What the 15th National Games leave behind is not only a set of upgraded venues but also an occasion to re-examine the existing problem framework.

Funding

This research was funded by the Research Project of the Guangdong Provincial Sports Bureau, grant number GDSS2024N105.

References

- [1] Xinhua News Agency. The Light of Sport Shines over the Bay Area: Written on the Eve of the Opening of the 15th National Games. Available online: https://www.spp.gov.cn/spp/tt/202511/t20251109_710572.shtml (accessed on 22 June 2026). (In Chinese)
- [2] Chasing Dreams in Guangdong, Hong Kong and Macao: Written One Year before the Opening of the 15th National Games. Available online: <https://www.zlb.gov.cn/20241111/7ab3336465534158b6f6ec6884451aba/c.html> (accessed on 22 June 2026). (In Chinese)
- [3] Alm, J.; Solberg, H.A.; Storm, R.K.; Jakobsen, T.G. Hosting major sports events: the challenge of taming white elephants. *Leis. Stud.* 2016, 35, 564–582.
- [4] Cashman, R. *The Bitter-Sweet Awakening: The Legacy of the Sydney 2000 Olympic Games*; Walla Walla Press: Sydney, Australia, 2006.
- [5] Searle, G. Uncertain legacy: Sydney's Olympic stadiums. *Eur. Plan. Stud.* 2002, 10, 845–860.
- [6] Drummond, R.; Cronje, J. Building a white elephant? The case of the Cape Town Stadium. *Int. J. Sport Policy Politics* 2019, 11, 57–78.
- [7] Preuss, H. The conceptualisation and measurement of mega sport event legacies. *J. Sport Tour.* 2007, 12, 207–228.
- [8] Preuss, H. A framework for identifying the legacies of a mega sport event. *Leis. Stud.* 2015, 34, 643–664.
- [9] Chappelet, J.-L. Mega sporting event legacies: a multifaceted concept. *Papeles Eur.* 2012, 25, 76–86.
- [10] BBC Sport. West Ham Olympic Stadium Move 'a Mistake'—Richard Caborn. Available online: <https://feeds.bbc.co.uk/sport/football/21897902> (accessed on 22 June 2026).
- [11] Chen, Y.X.; Wang, J.; Zhang, H.W. Operational status, problems and development of large sports venues in the post-Olympic period. *Journal of Beijing Sport University* 2012, 35, 26–30+35. (In Chinese)
- [12] Zeng, Q.H.; Zhou, Z.B.; Chen, Y.X.; et al. Post-event utilization of large comprehensive sports venues in China. *Sports Culture Guide* 2008, 6, 78–80. (In Chinese)
- [13] Yang, M. Research on the Development and Utilization of Sports Center Venues after the 14th Provincial Games in Qujing, Yunnan Province. Master's Thesis, Chengdu Sport University, Chengdu, China, 2018. (In Chinese)
- [14] Leng, T. Research on the Post-Games Utilization of the Salt Lake City Winter Olympic Venues. Master's Thesis, Beijing Sport University, Beijing, China, 2017. (In Chinese)
- [15] Gao, W.H. Research on the Post-Games Development and Utilization of Sports Venues of the 7th Military World Games. Master's Thesis, Wuhan Sports University, Wuhan, China, 2020. (In Chinese)
- [16] Cao, X.Z. A Study on the Post-Games Utilization of Venues of the 2nd National Youth Games. Master's Thesis, Shanxi University, Taiyuan, China, 2019. (In Chinese)
- [17] Cui, Z.H.; Gu, X.X.; Liu, W. Planning, construction and post-Games utilization of the Nanjing Youth Olympic venues. *Architecture & Culture* 2016, 9, 126–128. (In Chinese)
- [18] Nan, B.X.; Zhou, Y. An analysis of the post-Games utilization of the Beijing Olympic venues. *Journal of Sports and Science* 2010, 31, 55–60+54. (In Chinese)
- [19] Tan, J.X.; Zhou, L.J.; Chen, H. A review of research on the operation and management of public sports venues in China. *Journal of Physical Education* 2013, 20, 43–48. (In Chinese)
- [20] Zhuang, Y.D.; Lu, H.B. Obstacles to and development strategies for the privatization of public sports venues in China. *Journal of Beijing Sport University* 2012, 35, 27–31. (In Chinese)
- [21] Zhang, H. Models, operating procedures and key points in the restructuring of public sports venues in China. *Journal of Guangzhou Sport University* 2011, 31, 10–14. (In Chinese)
- [22] Why Did the National Games Build No New Large Venues for the First Time in History? Available online:

- <https://xinwen.bjd.com.cn/content/s690ffa96e4b02424b0c2b999.html> (accessed on 22 June 2026). (In Chinese)
- [23] Greeting the 15th Five-Year Plan with the 15th National Games: The Greater Bay Area Sets an Example for the World. Available online: <https://c.m.163.com/news/a/KEBA1PLE055694HZ.html> (accessed on 22 June 2026). (In Chinese)
- [24] Ministry of Finance; General Administration of Sport of China. Notice on Issuing the Measures for the Administration of Subsidy Funds for Public Sports Venues Open to the Public Free of Charge or at Low Charge, Cai Jiao [2022] No. 2; General Administration of Sport of China: Beijing, China, 28 January 2022. (In Chinese)
- [25] Ziakas, V.; Beacom, A. Re-thinking sport and physical activity: management responses to policy change. *Manag. Sport Leis.* 2018, 23, 255–260.
- [26] Ministry of Finance; General Administration of Sport of China. Measures for the Administration of Subsidy Funds for the Free and Low-Charge Opening of Large Sports Venues, Cai Jiao [2014] No. 54; General Administration of Sport of China: Beijing, China, 2014. (In Chinese)
- [27] General Administration of Sport of China. Launching the Action to Improve Opening Services at Public Sports Venues: Venues Open Free of Charge or at Low Charge Better Serve Public Fitness. Available online: <https://www.sport.gov.cn/n20001280/n20001265/n20067708/c24938504/content.html> (accessed on 22 June 2026). (In Chinese)
- [28] General Administration of Sport of China. Enquiry Concerning Subsidy Funds for Public Sports Venues Open to the Public Free of Charge or at Low Charge. Available online: <https://www.sport.gov.cn/n323/n10459/c26514895/content.html> (accessed on 22 June 2026). (In Chinese)
- [29] General Office of the General Administration of Sport of China. Notice on Issuing the Guidelines for the Service Evaluation of Free and Low-Charge Opening of Public Sports Venues (Trial) and the Public Disclosure Form for Service Evaluation Results. Available online: <https://www.sport.gov.cn/n315/n20001395/c24012044/content.html> (accessed on 22 June 2026). (In Chinese)
- [30] General Administration of Sport of China. Notice on Issuing the Specification for Basic Public Services of Public Sports Venues, Ti Gui Zi [2021] No. 7; General Administration of Sport of China: Beijing, China, December 2021. (In Chinese)
- [31] General Office of the General Administration of Sport of China. Notice on Further Strengthening the Management of the Free and Low-Charge Opening of Public Sports Venues to the Public; General Administration of Sport of China: Beijing, China, December 2024. (In Chinese)
- [32] State Council of the People's Republic of China. National Fitness Plan (2021–2025), Guo Fa [2021] No. 11; State Council: Beijing, China, 18 July 2021. (In Chinese)