

Original Article

Independent Bookstore Routes and the Dwell-Time Economy: How Bookshop Trails Increase Stay Duration and Local Spending

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ABSTRACT

Objectives: This study reconceptualizes independent bookstores as nodes of an experiential network and designs/evaluates walk- and transit-based bookshop routes across Yeongnam and Honam, Korea. **Methods:** The study proceeded in two stages. First, we coded store-level programs, spatial amenities, and concepts to derive attractiveness weights and a topic-diversity index and generated half-day (3-6 h) and full-day (6-10 h) routes using a multi-objective orienteering/prize-collecting framework. Second, using official route launches as treatments, we estimated causal effects through event-study, staggered difference-in-differences, and synthetic control with matched non-route neighborhoods. **Results:** Routes increased multi-stop visitation and moderately extended dwell time; produced 300-500 m local spending spillovers; and yielded equity gains—shorter minimum travel time/fewer transfers and higher participation—when passing neighborhoods adjacent to no-/single-bookstore jurisdictions. Effects were stronger at nodes with high program intensity, family-friendly features, and calendars synchronized with museums/markets. **Conclusions:** We propose design rules balancing attractiveness, diversity, equity, and travel cost, with behavioral indicators (completion, multi-stop share, spillovers) for management; and recommend partial randomization (stamp A/B tests, randomized route recommendations) and city-type templates for scalable validation.

Keywords: Access equity, Bookshop routes, Dwell time, Independent bookstores, Multi-stop visitation, Spending spillovers

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1. Introduction

Amid accelerating population decline and the prospect of regional extinction in Korea, the disappearance of bookstores—the most basic cultural retail infrastructure—signals more than a distribution problem; it is a structural symptom that threatens local cultural ecologies. As of July 2024, ten cities, counties, or districts report no bookstore at all, an increase of three over 2022. Excluding the island jurisdictions of Ongjin and Ulleung, eight of these ten fall below 0.2 on the Local Extinction Risk Index and are classified as high-risk. In the same vein, as of March 2024 there are twenty-five jurisdictions with only one remaining bookstore, four fewer than two years earlier. These places are generally in the extinction (entry) stage and face an intensified vicious cycle of restricted cultural access → con-

traction of cultural life → out-migration.

This study draws on the investigative report *Books as Cultural Spaces that Connect People: Records of Independent Bookstores* to make this reality legible, to reappraise the cultural and social value of local bookstores, and to explore actionable pathways for revitalization. Using the more widely recognized term “independent bookstore” in place of “local bookstore,” and organizing the corpus by regional blocs, the project set out to produce a fine-grained record of neighborhood bookstores on the verge of disappearance.

The report on which this article is based first quantifies “places where bookstores have vanished,” then presents cases from Yeongnam and Honam. It shows, through concrete scenes and operating practices, how bookstores become community anchor points in locales marked by vacant houses and shops, and how they sustain viable everyday

living areas through hybrid cultural functions such as reading groups, exhibitions, performances, and educational programs.

Data collection relied on the public list provided on the website of Dongne Seojeom Co., Ltd. Stores relevant to the aims of the study were screened and organized. The label “closed” is standardized to July 2024 and encompasses not only permanent closure but also transitions to online-only operations and the offline shutdown of stores that otherwise operated in both online and offline modes. The labels “unsuitable” and “insufficient data” reflect research-design criteria and do not imply any value judgment about the stores concerned.

Most importantly, the study underscores that a shrinking bookstore base entails the loss of cultural contact points, which in turn accelerates population decline. Policies targeting Local Extinction Risk areas should therefore designate bookstores as distinct recipients of support and actively transition them into community-linked multifunctional cultural hubs. The aim is to guide bookstores beyond mere retail toward roles as cultural centers and community hubs—an approach that can slow regional decline and improve quality of life.

Guided by this problem framing, the present article documents and analyzes, case by case, the spatial attributes, curation strategies, local partnership programs, and conditions for operational sustainability of independent bookstores across Yeongnam and Honam. By showing how bookstores reconnect books, people, and place, the study offers realistic policy options forged at the intersection of public cultural policy and civic entrepreneurship.

2. Literature Review

The starting point for understanding the social functions of independent bookstores is the third place thesis. Oldenburg argued for the importance of everyday anchors between home (first place) and work (second place) that sustain community communication and authenticity, a line later extended by urban studies showing that bookstores, cafés, and parks mediate local civic capital [1,2]. Spatial inequality in print access has been formalized as book deserts, where income- and residence-based segregation systematically reduces children’s opportunities to encounter print and to participate in cultural life [3]. This perspective speaks directly to the no-bookstore/single-bookstore jurisdictions addressed in this study; prior surveys in Korea—including many basic local governments across Yeongnam and Honam—confirm the overlap between bookstore scarcity and the Local Extinction Risk Index [4,5].

Within cultural tourism, cultural routes have become established tools for regional revitalization. The Council of Europe’s Cultural Routes program has advanced route-based development for over three decades, and the EU joint Routes4U initiative compiles multiple cases in which routes generate positive spillovers for SMEs and tourism income in remote and vulnerable areas [6]. Empirically, trails and routes extend dwell time and diversify movement patterns, stimulating consumption and employment. For instance, studies of the Camino de Santiago document how pilgrims’ expenditures translate into local value added and jobs [7], while more recent work quantifies links between experience quality and economic value on walking paths and boardwalks [8]. Mixed effects on residents’ perceptions, place identity, and income generation along pilgrimage routes have also been observed [9].

A growing quasi-experimental literature examines how walkability-oriented interventions affect nearby retail. Urban pedestrianization (traffic restrictions) can raise adjacent retail sales [10], and bicycle infrastructure investments tend to have neutral or positive effects on local businesses [11]. Health and environmental benefits from walking/cycling are standardized in WHO’s HEAT framework, enabling multi-benefit estimation across planning, transport, and tourism [12]. These findings align with our mechanism: pedestrian-centered routes amplify dwell and inflows and can spill over to commercial districts.

Methodologically, our bookshop routes are framed within the Operations Research literature as an Orienteering Problem (OP): under time/distance constraints, select a subset and sequence of nodes to maximize total reward. We adopt variants suited to real cities—Team OP, Time-Window OP (opening hours), and Prize-Collecting/Profit-based formulations—reflecting practical requirements [13]. Recent surveys outline multi-objective formulations that balance attractiveness, topic diversity, equity weights, and travel cost, alongside hybrid metaheuristics and mathematical programming tailored to urban tourism [14].

For causal identification of policy and infrastructure effects, standard tools include difference-in-differences (DiD), event studies, and synthetic control (SC) [15,16]. Applications exploiting staggered timing and spatial heterogeneity in routes and transport have improved credibility in tourism-demand and dwell-time analyses [17]. At the same time, scholars warn about pitfalls—substitution effects, leakage/spillovers, and inadequate controls for macro shocks and seasonality—calling for transparency and robustness checks [18,19]. Building on this guidance, the present study combines these methods to identify quasi-experimentally the impacts of route introduction on dwell time, multi-stop

visitation, and neighborhood spending, while evaluating design and equity effects using Korea's full inventory of independent bookstores and no-/single-bookstore area data.

3. Methods and Procedures

This study proceeds in two stages. First, we design bookshop routes that connect independent bookstores across Yeongnam and Honam for walking and public transit. Second, we evaluate causal effects by comparing outcomes before and after route launch and by benchmarking each treated area against similar, non-treated neighborhoods to determine whether dwell time and spending truly increased.

3.1. Data and route construction

The master frame is the full inventory compiled in the investigative report (addresses, operating status, notes), which was standardized to July 2024 from the public list maintained by Dongne Seojeom. The label "closed" is defined broadly to include permanent closure, a shift to online-only, and the offline suspension of hybrid stores. Building on this list, we integrate pedestrian and transit networks, nearby cultural anchors (museums, markets, galleries), event calendars, and auxiliary signals from online reviews to draw routes that are pleasant and feasible to traverse.

3.2. Node scoring

For each candidate node (store), we code a compact checklist that captures visitor experience: frequency of regular programs (talks, exhibitions, workshops, reading clubs), spatial amenities (seating, café, kids' zone, accessible circulation), and distinctive concepts (publishing + retail, zero-waste, local history, arts). Each item is scored on a three-level scale ("absent-present-frequent"), yielding an attractiveness score that increases with experiential value. We design half-day (3-6 h) and full-day (6-10 h) itineraries, prioritize walking and transit, avoid excessive transfers, include mandatory rest/comfort stops, and maintain topic diversity by mixing different store profiles rather than clustering a single theme.

3.3. Equity weighting

To enhance cultural access, routes are shaped to brush neighborhoods adjacent to jurisdictions with no or only one bookstore. Segments that reduce minimum travel time and transfers for these residents receive a modest equity

weight, reflecting the public-interest value of inclusive access.

3.4. Evaluation design

After routes are finalized, we implement a non-promotional, minimally invasive quasi-experimental design. The official launch date serves as the intervention. We estimate effects using event-study, staggered difference-in-differences, and synthetic control, distinguishing treatment effects from seasonality or citywide trends by pairing treated areas with comparable non-route neighborhoods over the same period. Outcomes fall into three baskets. (i) Dwell and movement: the share of multi-stop days (≥ 2 stores/day), a dwell-time proxy derived from timestamps in reviews/posts, and the route completion rate via stamps/QR. Because review/post timestamps capture only digitally traceable visitors, we treat this measure as a behavioral proxy rather than a population-representative estimate of all visitors' stay duration, and we triangulate it with route completion data and neighborhood-level aggregated indicators. (ii) Spending and spillovers: direct effects (paid conversions of in-store events, bundle sales such as books + goods) and indirect spillovers in nearby cafés, F&B, and small retailers (card-sales or visit indices within 300-500 m). (iii) Equity: changes in minimum travel time and transfers, and participation rates in vulnerable catchments.

3.5. Validity safeguards

To enhance credibility, we adhere to the following principles. Store attributes are double-coded by two independent coders with reconciliation. We control for seasonality (weekly/monthly program clustering, holidays, local festivals). To counter the "it was already booming" critique, each treated area is matched with a look-alike control not exposed to the route. We run placebo tests using fake launch dates processed through the same pipeline to check that results are not driven by spurious timing.

3.6. Procedural flow

We first curate the full list and spatial layers, select candidate nodes, and construct the experience score. We generate several half-day and full-day alternatives, field-check feasibility, and fix the pilot routes. We then define pre/post windows, collect outcome data, and select comparable neighborhoods for parallel benchmarking. Finally, we interpret results and assemble implementation guidance and policy templates by city type, consistently referencing the standardized inventory and the no-/single-bookstore information to ensure reproducibility.

4. Findings

4.1. Route design outcomes

The first optimization pass yielded two itinerary lengths—half-day (3-6 hours) and full-day (6-10 hours). In both, stores with higher experience weights—the composite of program intensity, spatial amenities, and concept—were naturally selected as core nodes. Imposing time-window constraints (opening hours and rest periods) led to the insertion of buffer nodes—rest/food stops and public cultural anchors (e.g., museums, markets)—which lowered mid-route attrition. A topic-diversity constraint (e.g., environment, arts, local history, family/kids) alleviated thematic congestion, broadened the route’s experiential spectrum, and strengthened revisit incentives. Assigning equity weights to segments brushing neighborhoods ad-

acent to no-bookstore/single-bookstore jurisdictions re-ordered candidate routes to more frequently cross 10-15-minute walking catchments in vulnerable areas, thereby embedding fair access at the design stage. All design steps drew on the full inventories for Yeongnam and Honam (Tables 1 and 2) and the store-level narratives.

The following table summarizes representative pilot-route cases in Yeongnam and Honam. It condenses the manuscript’s city-specific interpretations into a comparative format, highlighting salient node composition, major time windows, observed route effects, and practical design implications.

The following table synthesizes the heterogeneous patterns discussed across the Results section. It shows how route effects varied by city context, route composition, family-friendly features, topic diversity, equity weighting, and robustness conditions.

Table 1. Regional pilot-route profiles and observed effects

Region	City / Route Area	Salient node composition	Peak time window	Main observed effect	Spillover / access pattern	Route design implication
Yeongnam	Gyeongju historic core	Exhibitions, talks, souvenirs, and cafés	Weekends	Quality and length of stays increased	Calendar alignment with museums and heritage sites amplified adjacent-district spillovers; continuous historic scenery and walkways reduced route dropout	Synchronize route programming with nearby cultural anchors and preserve scenic pedestrian continuity
Yeongnam	Daegu Jung-gu modern-alley district	Publishing-plus stores and regular workshops	Weekday evenings / post-work hours	Short visits accumulated into meaningful dwell; multi-stop visitation increased	Book markets and alliance-event weeks coincided with rises in nearby café and F&B sales; improved alley walkability and signage supported completion	Design short after-work routes with strong wayfinding and recurring event bundles
Honam	Jeonju Hanok Village-Seonosong	Family-friendly experiential spaces, kids-oriented programs, and souvenir-linked bookstore nodes	Family/tourist peak periods	Family-party dwell increased and multi-stop movement became more diversified	Improved pedestrian connectivity between the two areas diversified movement patterns; quarterly gaps in completion and multi-stop rates persisted	Strengthen family-friendly routing and inter-area pedestrian linkage

Table 2. Segment-level heterogeneity and route-design evidence

Segment / Condition	Observed pattern in the manuscript	Route-design implication
Tourism-rich cities	Larger gains in multi-stop visitation and completion were observed on weekends and in peak seasons	Concentrate route programming in high-demand tourist windows
Large-city downtowns	Short after-work stays accumulated into higher revisit frequency	Use shorter, transit-friendly evening routes
Family-friendly features	Family share and dwell duration increased more effectively	Include kids’ zones, child-focused programs, seating, and cafés
Higher topic diversity	Repeat visits were induced more strongly	Mix environment, arts, local history, and family/kids themes within one route
High program-intensity nodes	Spillovers were larger around nodes with regular exhibitions, talks, and workshops	Prioritize high-program-intensity stores as core nodes
Calendar synchronization with museums/markets	Spillovers spiked on synchronized dates	Establish governance for cross-venue calendar coordination
Equity-weighted routes	Minimum travel time and transfers fell, while participation rose in vulnerable catchments	Incorporate adjacent no-/single-bookstore jurisdictions into route design
Robustness checks	Placebo launch dates yielded null effects; faux routes underperformed; results were stable across alternative specifications	Maintain robustness diagnostics as a standard evaluation protocol

4.2. Changes in dwell and movement

Following the official route launch, treated areas showed a clear improvement in movement-related outcomes relative to matched comparison areas. Most importantly, the share of multi-stop visitation increased after the intervention, indicating that visitors were more likely to move across multiple bookstores and associated cultural nodes within a single outing rather than making isolated, one-stop visits. This pattern is consistent with the core logic of the route design, which sought to transform dispersed bookstore destinations into connected experiential sequences.

The temporal structure of the effects also supports the interpretation that the route intervention altered visitor behavior rather than merely reflecting background fluctuations. Pre-intervention patterns remained broadly stable, while the post-launch period showed sustained positive differences in multi-stop activity. In substantive terms, this suggests that the route design functioned not only as a navigational aid but also as a behavioral organizer that increased the likelihood of linked visits across bookstores, nearby cultural anchors, and supporting rest or consumption nodes.

A similar pattern was observed for dwell-related outcomes. The dwell-time proxy derived from timestamped online traces showed a post-launch increase, indicating that visitors tended to remain longer within the route environment once the intervention was introduced. Although this measure should be interpreted cautiously as a behavioral proxy rather than a complete population-level measure of stay duration, its direction was consistent with the broader pattern observed in route completion and linked movement outcomes. Taken together, these findings suggest that the route intervention increased not only the number of connected visits but also the temporal depth of engagement within the surrounding cultural-commercial setting.

Route completion patterns further reinforce this interpretation. Completion was more pronounced during weekends and holidays, when visitors had greater discretionary time, and it was also stronger during weeks in which curated exhibitions, author talks, or other scheduled programs were present. This indicates that route effectiveness depended not simply on spatial linkage alone, but on the interaction between route structure and programmed cultural motivation. In other words, the route worked best when movement incentives and experiential incentives were mutually reinforcing.

The effects were not uniform across all urban contexts. In tourism-oriented cities, gains in completion and multi-stop visitation were especially visible during weekend and peak-demand periods, suggesting that route-based

bookstore circulation can be incorporated into broader leisure itineraries. In contrast, large-city downtowns showed a somewhat different pattern: rather than long, uninterrupted stays, the route appeared to accumulate shorter after-work visits into repeated, meaningful engagement over time. This distinction is important because it indicates that the same route logic may generate different but still valuable dwell-time outcomes depending on city structure, travel rhythms, and surrounding land use.

Overall, the findings from this subsection show that the intervention was associated with a meaningful restructuring of visitor movement. The route increased the likelihood of linked visits, lengthened the effective time spent within the bookstore-centered experience environment, and improved completion under favorable temporal and programmatic conditions. These results support the interpretation that route design can serve as a practical tool for converting culturally fragmented destinations into more coherent and behaviorally effective circuits of movement and stay.

4.3. Spending spillovers

The route intervention was also associated with positive spillover patterns in adjacent commercial areas. Within the defined neighborhood buffers surrounding participating stores, aggregated indicators of footfall and card sales moved upward relative to matched non-route areas, suggesting that the effects of the intervention were not confined to bookstore interiors alone. Instead, the route appears to have extended visitor presence into nearby cafés, food-and-beverage establishments, and small retailers, thereby generating localized commercial benefits beyond the focal cultural nodes themselves.

These spillovers should be interpreted as part of a linked dwell-time mechanism. The route did not simply attract visits to bookstores; rather, it encouraged visitors to remain within the district longer, to sequence multiple stops, and to engage in ancillary consumption between or after bookstore visits. In this sense, the observed increase in surrounding commercial activity is consistent with the idea that bookstore routes can function as anchors of localized circulation, translating extended cultural engagement into adjacent economic activity.

The direct effects were visible in store-linked consumption behaviors as well. Participating stores showed stronger paid conversion in relation to in-store events, and bundle-type purchases, such as books combined with goods or related items, became more active after route introduction. This is substantively important because it indicates that the route did not operate only as a symbolic branding device; it also appears to have supported transaction-gen-

erating behavior at the node level. The route thus enhanced the commercial relevance of bookstores not by replacing their cultural role, but by strengthening the conditions under which cultural participation and retail conversion could occur together.

Indirect effects were observed most clearly in the surrounding commercial ecosystem. Nearby cafés, food-and-beverage establishments, and small retailers displayed concurrent increases in visit or transaction-related indicators, particularly in areas where bookstore nodes had high program intensity or where route timing was synchronized with museums, markets, or other cultural venues. This suggests that spillovers were conditioned not only by bookstore presence, but by the degree to which the route was embedded in a wider schedule of cultural and pedestrian activity. In practical terms, the route generated the strongest local commercial effects when it functioned as part of an orchestrated district-level experience rather than as an isolated bookstore itinerary.

The spatial pattern of the spillover is also analytically meaningful. The fact that effects were detectable within a relatively limited 300-500 m range indicates that the economic benefits were localized rather than diffusely distributed. This strengthens the interpretation that the route contributed to neighborhood-level activation in immediately adjacent commercial environments. At the same time, the limited spatial radius also implies that route-based interventions are most likely to benefit businesses that are physically and behaviorally integrated into the same walkable circuit. The spillover effect, therefore, should be understood as place-based and proximity-sensitive rather than broadly citywide.

Importantly, the results are more consistent with localized gains than with a simple redistribution of the same spending within the same block. Because treated areas outperformed matched comparison areas over the same period, the pattern cannot be reduced entirely to a neutral reshuffling of pre-existing demand. Nevertheless, the present design does not allow definitive separation between newly generated demand, external inflow, and within-city displacement. For this reason, the findings are best interpreted as evidence of localized commercial uplift associated with route-based cultural circulation, rather than as conclusive proof of region-wide net economic growth.

Taken together, the evidence in this subsection indicates that bookstore routes can generate both direct and indirect economic effects. Directly, they strengthen event-linked conversion and hybrid retail purchases at participating stores. Indirectly, they appear to extend visitor presence and spending into adjacent small-business environments. The broader implication is that route-based cultural design

can increase the economic productivity of local cultural districts not through large-scale redevelopment, but through finer-grained coordination of movement, programming, and neighborhood-level commercial linkage.

4.4. Equity and access gains

Routes incorporating equity weights produced significant reductions in minimum travel time and transfers for residents in vulnerable catchments, alongside higher participation (stamp/QR and event attendance proxies) than in controls. Rather than maximizing exposure in fragile areas, the decisive factor for participation was the quality of linkage—continuous, safe pedestrian paths with clear wayfinding and guaranteed rest/comfort nodes—between anchor, buffer, and bookstore nodes. This indicates that route-level design can narrow cultural-access gaps where jurisdictions lack bookstores.

4.5. Heterogeneity by segment

Effect sizes varied by city type, time window, and route composition. Tourism cities exhibited larger gains in multi-stop visitation and completion on weekends/peak seasons; large-city downtowns accumulated short after-work stays into higher revisit frequency. Routes with family-friendly features (kids' zones, child-focused programs) increased the family share and dwell duration more effectively, while higher topic diversity (environment, arts, local history, etc.) more strongly induced repeat visits. These patterns reflect differential motivation across visitor types, consistent with store-level combinations noted in the report (e.g., exhibition/talk + souvenirs + café in Gyeongju; publishing + workshops in Daegu).

4.6. Robustness and sensitivity

Placebo tests with randomized launch dates yielded null coefficients on key outcomes, and routes outperformed randomized faux routes of comparable length. Results were stable in specifications with city and month fixed effects, propensity score matching/weighting, and synthetic control augmentations using city-level aggregates. Because major festivals can overstate treatment effects, such periods were flagged and interpreted conservatively. Asynchronous data cadences (e.g., card sales vs. mobility) were mitigated by within-period standardization.

4.7. City-specific interpretations

In Gyeongju's historic core, nodes combining exhibitions,

talks, souvenirs, and cafés lifted both the quality and length of weekend stays; calendar alignment with museums/heritage sites amplified adjacent-district spillovers, while continuous historic scenery and walkways reduced route dropout.

In Daegu Jung-gu's modern-alley district, publishing-plus stores with regular workshops accumulated short post-work visits into meaningful dwell, and weeks featuring book markets or alliance events repeatedly showed concurrent rises in multi-stop visitation and nearby café/F&B sales; improved alley walkability and wayfinding signage supported higher completion.

In Jeonju Hanok Village-Seonosong, family features (kids/experiential) and souvenir offerings increased family-party dwell, and improved pedestrian connectivity between the two areas diversified movement patterns. Even after transient peaks in family/tourist demand, quarterly gaps in completion and multi-stop rates persisted, evidencing a sustained inflow mechanism for the route.

5. Discussion

The route-based intervention advanced in this study redefines independent bookstores not as isolated retail outlets but as nodes in an experiential network spanning the city and its everyday catchments, and it empirically substantiates a mechanism linking multi-stop visitation → extended dwell time → localized spending spillovers. This section interprets the operative pathways, distills design and operating principles (including equity implications), and addresses limitations and future work.

First, the primary mechanism through which bookshop routes amplify the dwell-time economy is an increase in experience density—the joint effect of program intensity and topic diversity. In our coding, nodes with frequent regular programs (exhibitions, author talks, workshops, reading clubs) were selected as core stops, repeatedly stimulating visitors' motivation to linger. The simultaneous rise in completion and multi-stop rates at stores that combine publishing functions, curated exhibitions, and family-friendly spatial concepts (kids' zones, cafés) supports the view that a program-space-concept triad drives dwell. Because the report documents these traits at the store level in detail, they translate readily into field-ready design variables.

Second, route-level topic diversity does more than expand the menu of attractions: it disperses itineraries and creates repeat-visit incentives. By reducing overconcentration in any single theme and combining heterogeneous interests—environment, arts, local history, family/kids—within one course, visitors can enjoy sequential satisfaction

near their preferences while experiencing adjacent genres. The result is a higher likelihood that routes become everyday, repeatable cultural consumption paths rather than one-off sightseeing. The replication of effects across distinct contexts (tourism cities vs. large-city downtowns) and time windows (weekends vs. weekday evenings) indicates that diversity acts as a stabilizer against spatial-temporal heterogeneity (cf. multi-objective formulations that co-optimize experience, diversity, equity, and travel cost [13,14]).

Third, embedding equity weights in design carries substantial policy significance from a cultural-welfare perspective. When routes are drawn to brush neighborhoods adjacent to no-/single-bookstore jurisdictions, minimum travel time and required transfers fall, and participation rates in those areas rise relative to controls. In effect, routes function as a mobility-based instrument to narrow cultural-access gaps, providing “brought-to-you” opportunities where bookstores are scarce and contributing to the accumulation of cultural capital within everyday catchments. Because the no-/single-bookstore lists and their overlap with extinction risk are systematically presented in the report, the same principles can be extended to other regions.

Fourth, the quality of spillovers hinges on schedule-synchronized governance. When calendars with public and private cultural anchors (museums, markets) are coordinated to densify programming in specific weeks, incentives to complete routes strengthen and adjacent commercial indicators (transactions, visits) rise in tandem. Economic feedbacks scale when the route operates not as a one-off event but as a coordination platform at the city/catchment level. In practice, a standing coalition among bookstores-libraries-museums-chambers of commerce, coupled with standardized stamp/QR, passports, and rewards, supports continuity. We recommend a weekly cadence of programs, explicit role-sharing among core-buffer-connector nodes, and baseline family-friendly and accessible features. The report's store-level operations and spatial information underpin these guidelines.

Fifth, behavioral indicators should anchor performance management and subsidy design. Metrics such as completion rate, multi-stop share, paid conversions for route-linked events, and relative changes in adjacent commercial activity capture route efficacy directly and lend themselves to performance-based funding (PBF). To curb overestimation due to substitution, seasonality, or major events, policy should require comparability with control areas and codify robustness diagnostics (e.g., placebo timing, randomized routing) as preconditions for disbursement [15,16].

Sixth, scalability deserves attention. Yeongnam and Honam were suitable pilots owing to well-curated in-

ventories and metadata; the same logic applies elsewhere. During diffusion, provide city-type templates (tourism cities / large-city downtowns / rural-coastal / island areas) and node-coding guides, and promote inter-regional linkages to convert day-trips into multi-night stays. Above all, maintain route structures that repeatedly skim the everyday catchments of no-/single-bookstore jurisdictions so that routes function as cultural-welfare access improvements, not merely as short-term tourism products. Overlap maps with extinction risk should be continuously updated to sharpen policy targeting.

Finally, the Independent Bookstore Route is symbolically important as an attempt to reallocate local cultural infrastructure “from points to lines, and from lines to networks.” As the report shows, bookstores across Yeongnam and Honam already serve as community anchors through programs and spaces that connect books and people. Routes link these dispersed anchors, lengthen the time people spend in place, and orchestrate the diffusion of that time into adjacent districts and public cultural venues. When design, operations, and evaluation are tuned to the rhythms and demands of each city and everyday catchment, routes can become a practical instrument for enhancing equity in cultural access and restoring fine-grained local economic circulation.

6. Conclusion and Recommendations

This study redefines independent bookstores not as stand-alone retail outlets but as nodes in an experiential network, designs and deploys half-day and full-day bookshop routes, and estimates their effects quasi-experimentally. In summary, route introduction simultaneously induced greater multi-stop visitation, a modest extension of dwell time, localized spending spillovers in adjacent commercial areas, and improved access for vulnerable catchments. These results are reproducible because they rest on systematically curated base data—the complete Yeongnam/Honam inventories and store-level information on operations, spatial attributes, and concepts (including up-to-date rules for status and notes). Information on no-/single-bookstore jurisdictions provided the empirical basis for embedding equity weights in both design and evaluation.

Findings indicate, first, that the operative pathway of the dwell-time economy can be interpreted as a cycle of experience density (the conjunction of regular programming, spatial amenities, and distinctive concepts) → multi-stop visitation/route completion → spending in adjacent districts. Notably, nodes that combine publishing functions with regular exhibitions/author talks/workshops and fam-

ily-friendly spaces (kids’ zones, cafés) exhibited simultaneous gains in completion and multi-stop shares; when calendars were synchronized with museums and markets, the amplitude of spillovers increased. This suggests that economic feedbacks scale when routes operate not as isolated events but as a city-level coordination platform. Second, embedding topic diversity functions as a stabilizer that converts short-run visits into repeat use. When heterogeneous themes—environment, arts, local history, family—are combined within a single course, revisit incentives rise; effects replicated across divergent demand patterns in tourism cities (weekends/peak seasons) and large-city downtowns (weekday evenings). This supports a multi-objective design approach that balances experience weights, diversity, and travel cost [13,14]. Third, the equity effects carry substantive policy implications. Designing routes to brush catchments adjacent to no-/single-bookstore jurisdictions reduced minimum travel time and transfers, and raised participation rates in those areas relative to controls—evidence that fair access can be realized at the level of movement design. The compiled no-/single-bookstore lists and their overlaps with extinction risk serve as a durable basis for sharper targeting as routes scale to other regions.

Fourth, rigorous evaluation design and robustness checks underwrite credibility. Event studies, staggered DiD, and synthetic control jointly addressed pre-trends, seasonality, and macro shocks; placebo timing (fake launch dates) and randomized routing ensured robustness [15, 16]. This quasi-experimental frame aligns with performance-based funding (PBF) that manages routes using behavioral indicators.

Because the strongest effects were observed where program intensity, family-friendly features, and calendar synchronization were jointly present, the empirical findings support policy packages that prioritize coordinated route governance and node-level experience design rather than isolated store-level subsidies alone. For policy and practice, we therefore advance five recommendations. First, design standardization should distinguish half-day (3-6 hours) and full-day (6-10 hours) courses; require rest areas, toilets, and universal-access nodes; impose diversity constraints to prevent thematic clustering; and adopt consistent wayfinding/signage. These standards should be finalized after field validation against the full inventories and store-level operational/spatial attributes. Second, institutionalize equity weighting by awarding design points to segments that traverse catchments adjacent to no-/single-bookstore jurisdictions, while complementing weak-transit segments with shuttles and mobile pop-ups to improve access. The continuously updated no-/single-bookstore lists and extinction-risk overlays should re-

main the objective basis for weights. Third, establish standing governance and calendar synchronization: a permanent bookstores-libraries-museums-chambers coalition; standardized stamp/QR, passports, and rewards; a weekly cadence of programming; and periodic amplification of motivation via alignment with urban festivals, exhibitions, and markets. Role partitioning among core-buffer-connector nodes and default inclusion of family-friendly and accessible features are recommended. Fourth, tie PBF to behavior by linking tiered incentives to completion, multi-stop share, paid conversions for route-linked events, and relative changes in adjacent commercial activity, while codifying placebo timing and randomized routing checks as preconditions for disbursement to strengthen attribution and transparency. Fifth, a diffusion roadmap should provide city-type templates (tourism city / historic downtown / rural-coastal / island) and node-coding guides, tuning experience/equity/cost weights to each locale's catchment structure and travel modes. Maintaining the inventory's update protocol preserves definitional and evaluative consistency during regional scale-out.

Limitations remain. First, because the pilot regions are Yeongnam and Honam, the estimated effect sizes may partly reflect regional tourism structure, urban form, pedestrian connectivity, and bookstore ecology specific to these areas. The route-design logic is portable to other regions, but the magnitude of impacts should not be assumed to transfer automatically to metropolitan clusters, inland medium-sized cities, or sparsely connected rural/coastal areas without recalibration of node weights, travel modes, and catchment structure. Second, some dwell and spending indicators rely on proxies (reviews/posts, aggregated card sales), which entail risks of exposure and sampling bias. Third, heterogeneity in operating quality across cities may not be fully captured by average treatment effects (ATE). Future work should therefore combine offline intercept surveys, visitor-origin data, and partial randomization—such as stamp-reward A/B tests, placebo paths, and randomized route recommendations—to strengthen identification, external validity, and transparency.

In sum, the bookshop route is a strategy for reallocating cultural infrastructure from points to lines, and from lines to networks, and it provides quasi-experimental evidence that route-based cultural consumption is associated with localized gains in adjacent commercial activity. Distinguishing more conclusively between area-wide net growth and intra-urban displacement will require future analyses using visitor-origin and expenditure-composition data. The design-evaluation frame is portable to other regions and provides a basis for sustainable dwell-time policy with equitable access as a first principle. With continuous in-

ventory updates and ongoing monitoring of no-/single-bookstore jurisdictions, routes can maximize both public value and economic viability.

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Conflicts of Interest

The authors declare no conflict of interest.

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