land

MDPI

Article

Tourism-Led Rural Restructuring and the Livelihood Sustainability of Older Return Migrant Workers: A Push–Pull Analysis of a Scenic-Area Fringe Village in China

Shiyi Song, Xiaowen Zhang *, Keer Wang, Mengyan Ning, Jianxiang Huang and Ya Gao *

College of Architecture, Xi'an University of Architecture and Technology, Xi'an 710055, China; songshiyi@xauat.edu.cn (S.S.); 2201020061@xauat.edu.cn (K.W.); 2201020017@xauat.edu.cn (M.N.); 18257790611@163.com (J.H.)

* Correspondence: zhangxiaowen0722@163.com (X.Z.); gy411@xauat.edu.cn (Y.G.); Tel.: +86-18220607088 (X.Z.); +86-13689260314 (Y.G.)

Abstract

Rural tourism drives spatial restructuring in scenic-area fringe villages while reshaping local mobility and livelihood conflicts. Older return migrant workers face the dilemma of sustaining livelihoods after return, yet the mechanism remains unclear. This study integrates push–pull –theory, social exclusion theory, the sustainable livelihoods framework, and production-of-space theory into a four-dimensional framework spanning physical, social, cultural, and industrial domains, extending push–pull theory to the post-return stage. Based on a case study of Xianyukou Village at the Mount Hua scenic-area fringe, it adopts a sequential explanatory mixed-methods design using 114 questionnaires, 16 semi-structured interviews, and spatial data, applying PLS-SEM analysis of hypothesized indirect associations, analytic hierarchy process, and thematic analysis. The physical space is dominated by push forces; the social space by isolation through homogeneous networks and limited cross-class interaction; the cultural space by institutional thresholds and failed capital conversion; and the industrial space by high tourism dependence, business contraction, and low-quality employment. The findings are consistent with the proposed sequence of associations from physical-space exclusion through social-space isolation and cultural-capital conversion barriers to tourism-industry marginalization and reduced livelihood stability. The study proposes village-level endogenous push forces, extending push–pull theory from whether to return to whether returnees can sustain stable livelihoods, and offers evidence for reorienting fringe villages from tourism growth toward inclusive rural tourism and livelihood governance.

Keywords: rural tourism; older return migrant workers; livelihood sustainability; spatial exclusion; push–pull theory; social justice

Check for updates

Academic Editors: Keith Halfacree and Dong Jiang

Received: 16 October 2026
Revised: 4 November 2026
Accepted: 16 November 2026
Published: 18 November 2026

Copyright: © 2026 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

1. Introduction

Against the background of rural revitalization and the continuing integration of culture and tourism, scenic-area fringe villages have become frontier zones where tourism development and rural living spaces intersect [1,2]. Located between the core scenic area and traditional rural living spaces, such villages are highly dependent on the tourist flows, policies, and capital of the scenic area. Rural tourism can create employment and business opportunities, improve infrastructure, and enhance local attractiveness; however, economic growth from rural tourism does not equate to sustainable rural development [3,4]. Tourism

 https://doi.org/10.3390/land15112209

development is often accompanied by the compression of agricultural space, the functional conversion of housing, the capitalization of public space, and the polarization of benefits, thereby restructuring rural spatial organization and resource allocation [1,2,4]. If land, public space, employment, and tourism benefits are not fairly distributed across resident groups, tourism growth may erode the social inclusiveness and long-term resilience of destinations.

Older return migrant workers constitute an important component of the rural return population and a representative marginalized group within it. Here, older return migrant workers refer to middle-aged and older laborers aged 45–65 (this is a study-specific operational category, following common sampling conventions for labour-active older return migrants in China [5,6]) with at least one continuous year of urban work experience, who return to their villages of household registration for long-term residence because of advancing age, urban employment thresholds, and family-care responsibilities. Compared with the new generation of migrant workers, this group has relatively limited human and financial capital and depends heavily on land, housing, acquaintance networks, and local low-entry-barrier employment; they rely more on the village for housing, old-age support, and livelihood rebuilding, yet constraints of age, skills, and capital accumulation make it difficult for them to enter the core business and high-return segments of tourism [7]. Existing return-migration studies focus mainly on mobility decisions, treating urban employment pressure, age limits, and living costs as push forces for return, while family ties, place attachment, and lower living costs form rural pull forces [8,9]. However, returning does not mean that livelihood rebuilding is complete [10]. Tourism development continually transforms land, housing, public space, social networks, and industrial opportunities within the village, and older return migrant workers must reconfigure their existing resources within new spatial and opportunity structures [2,10]. Land, family relations, local experience, and work skills do not necessarily translate into stable income, moving some older return migrant workers from the "urban fringe" to the "periphery of the rural tourism economy" and producing the post-return dilemma of difficulty in sustaining livelihoods after return. As a vulnerable yet vital segment of rural society, the reintegration of this group determines not only its own livelihood quality but also rural population stability, intergenerational equity, and community sustainability.

Livelihood space research situates livelihoods within concrete physical environments, social relations, cultural institutions, and industrial opportunities, emphasizing how the accessibility of spatial resources, the openness of social networks, the convertibility of cultural capital, and the inclusiveness of industrial opportunities shape the transformation of livelihood capital [11–13]. Social exclusion theory further indicates that the marginalization of disadvantaged groups is structural, multidimensional, and cumulative. In scenic-area fringe villages, tourism-driven spatial restructuring may first alter physical livelihood conditions such as land, housing, and public space, and may be associated with differences in social interaction and organizational participation; restricted social networks may in turn reduce access to information, training, and cooperation, which may constrain the conversion of cultural capital into economic value. Ultimately, individuals may be confined to peripheral industrial jobs characterized by low thresholds, low returns, and weak protection [3,4,12]. Spatial exclusion across dimensions may thus form a cumulative pathway of livelihood disadvantage.

Three major gaps remain in the literature. First, regarding the research subject, studies of rural tourism in scenic-area fringe villages seldom treat older return migrant workers as a distinct group, making it difficult to explain their particular process of livelihood re-embedding. Second, regarding mechanism, relevant studies tend to discuss changes in land, industry, or social relations separately and lack an account of the continuous transmission

among spatial dimensions. Third, theoretically, the classic push–pull theory is used mainly to explain why migrants return, with little attention to the push and pull forces that emerge within the village after return [9,10]. Tourism-driven spatial restructuring may turn the rural space that originally constituted a return pull into a new source of exclusion; push–pull theory therefore needs to be extended to the post-return stage.

Treating the livelihood space within the village as a new push–pull field after return, this study integrates spatial triad dialectics, social exclusion theory, the sustainable livelihoods framework, and push–pull theory to construct a four-dimensional endogenous push–pull framework of physical, social, cultural, and industrial spaces. The physical space forms the basic carrier of livelihood activities; the social space shapes access to information, relations, and organizational resources; the cultural space concerns opportunities to convert existing cultural capital into livelihood value; and the industrial space is where multidimensional spatial conditions may be reflected in employment, income, and livelihood stability. This study examines the hypothesized sequence of associations—physical space exclusion → social space isolation → failed cultural capital conversion → tourism-industry marginalization—across the four dimensions, and proposes the concept of the village-level endogenous push forces to explain the re-exclusion process after return.

Accordingly, this study addresses three questions. First, how does tourism-driven rural spatial restructuring affect the physical, social, cultural, and industrial opportunities of older return migrant workers? Second, how is spatial exclusion across dimensions associated with older return migrant workers' livelihood stability? Third, is multidimensional spatial exclusion indirectly associated with livelihood stability and long-term intention to stay through the proposed sequence? Taking Xianyukou Village at the fringe of China's Mount Hua scenic area as the case, the study adopts a sequential explanatory mixed-methods design, using PLS-SEM as the core method to test variable relationships, combined with AHP, interview thematic analysis, and spatial auxiliary data to explain the mechanisms. The study brings older return migrant workers into research on tourism-driven spatial restructuring in scenic-area fringe villages, examines the proposed sequence of inter-dimensional associations of the four-dimensional livelihood space, extends push–pull theory to the post-return stage, and provides empirical evidence for inclusive rural tourism and livelihood governance in such villages.

2. Theoretical Framework and Hypotheses

2.1. Theoretical Foundations

Using push–pull theory as the core explanation of dynamics, spatial triad dialectics as the spatial foundation, social exclusion theory as the transmission mechanism, and the sustainable livelihoods framework as the anchor for outcomes, this study builds a logically progressive, integrated theoretical framework that supports the four-dimensional endogenous push–pull framework of physical, social, cultural, and industrial spaces. The four theories are not parallel; they respectively answer four core questions in the formation of livelihood vulnerability among older return migrant workers: dynamics, field, mechanism, and outcome.

First, push–pull theory endows the four-dimensional space with dynamic properties [8,14], answering where the forces of exclusion come from. Traditional push–pull theory is used mainly to explain why migrant workers return under the urban–rural dual structure [8,14]. In the post-return stage, however, new endogenous push forces may also form within the village, including exclusion from land and public space, the breakdown of social networks, blocked conversion of cultural capital, and barriers to entering the tourism sector; conversely, housing improvement, social inclusion, open access to cultural resources, and stable industrial opportunities can form endogenous pull forces [15,16]. The

relative strength of these forces determines whether older return migrant workers can move from returning to the village to staying stably. This theory provides the core dynamic perspective for examining how spatial restructuring within the village generates endogenous push forces.

Second, spatial triad dialectics defines the field in which exclusion operates, answering where exclusion occurs. Tourism transformation is not merely environmental improvement but a process in which spatial use, power relations, and social relations change together [17–19]. This theory shows that changes in land, housing, public space, and business carriers (the physical space) further alter social networks (the social space), cultural value (the cultural space), and industrial opportunities (the industrial space). Spatial triad dialectics anchors abstract push–pull forces in concrete rural spatial dimensions, providing the ontological basis for distinguishing the four-dimensional livelihood space.

Third, social exclusion theory reveals the transmission mechanism of spatial exclusion, answering how exclusion operates. Social exclusion theory emphasizes the structural, multidimensional, and cumulative nature of poverty and marginalization [20,21]. Accordingly, this study understands the livelihood vulnerability of older return migrant workers as the outcome of multidimensional spatial exclusion, paying particular attention to how exclusion moves from one dimension to another rather than treating each type of exclusion as an unrelated, isolated factor [22]. Social exclusion theory is the key logical thread connecting the spatial field to livelihood outcomes, providing the mechanism for the serial-mediation path proposed here.

Finally, the sustainable livelihoods framework anchors the livelihood outcomes of multidimensional exclusion, answering what exclusion leads to. The framework emphasizes the dynamic links among capital, the institutional environment, livelihood strategies, and livelihood outcomes [23,24]. This study further treats space as a key field for capital conversion: the same land, human, or social capital may yield different outcomes under different spatial opportunity structures [11,25]. This theory provides the evaluation criteria for assessing the livelihood stability and intention to stay of older return migrant workers. In sum, push–pull theory provides the dynamic mechanism, spatial triad dialectics the spatial setting, social exclusion theory the process mechanism, and the sustainable livelihoods framework the outcome evaluation. The four are organically integrated to form the theoretical basis for analyzing the dilemma of difficulty in sustaining livelihoods after return.

2.2. The Four-Dimensional Physical–Social–Cultural–Industrial Endogenous Push–Pull Framework

Building on this theoretical integration, this study constructs the four-dimensional endogenous push–pull framework of physical, social, cultural, and industrial spaces (Figure 1). The physical livelihood space is the fundamental spatial basis of livelihood activities for older return migrant workers, shaping the spatial boundaries of their daily activities and their access to resources [17]; the social livelihood space is relevant to individuals' access to information, support, and opportunities through social networks [26]; the cultural livelihood space concerns whether the cultural capital accumulated in cities can be converted into economic and livelihood value in the rural field [27] (pp. 241–258); and the tourism-industry livelihood space is the key link through which multidimensional exclusion may be reflected in income and employment outcomes [3,23]. The four are not parallel but are organized in a theoretically proposed sequence from the physical base to social relations, then to cultural conversion, and finally to industrial opportunities. This ordering is theoretically preferred because physical space provides the livelihood base, social ties shape access to information and institutions, and cultural-capital conversion is linked to subsequent industrial participation. Accordingly, this study proposes the following hypothesis chain.

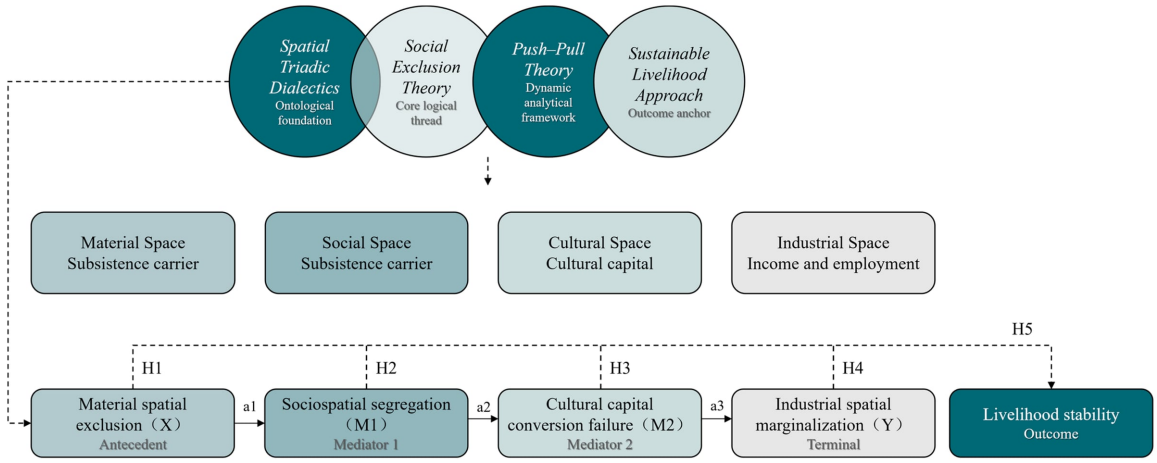


Figure 1. The four-dimensional physical–social–cultural–industrial endogenous push–pull analytical framework.

Physical livelihood space and livelihood stability

The physical livelihood space is the most direct carrier of livelihoods for older return migrant workers. If tourism development reduces farmland, changes the use of residential land, or compresses public space, it may constrain their access to basic resources and may narrow their radius of daily activity, and may be associated with higher barriers to entering the core tourism business space [3,17]. Therefore:

H1. *Physical livelihood space exclusion may be associated with livelihood stability of older return migrant workers and may show an indirect association through the social livelihood space.*

Indirect association involving the social livelihood space

The social livelihood space is relevant to individuals' access to information, support, and organizational resources. Marginalization in the physical livelihood space may be associated with individuals remaining in non-core residential areas and peripheral activity networks, and with reduced access to business-operator networks, policy-information networks, and public-governance networks; in turn, social isolation may be associated with more limited information and cooperation for cultural capital conversion [26,28]. Therefore:

H2. *Social livelihood space isolation may be indirectly associated with livelihood stability.*

Indirect association involving the cultural livelihood space

Whether cultural capital can be converted into tourism value depends not only on whether individuals possess traditional skills or local knowledge but also on whether cultural resources can enter channels for display, business operation, training, and marketing. When social networks and organizational ties are insufficient, the cultural capital of older return migrant workers may remain at the household and private level and may be difficult to convert into industrial value [3,28]. Therefore:

H3. *Failed cultural capital conversion may be indirectly associated with livelihood stability.*

Tourism-industry livelihood space and livelihood stability

The tourism-industry livelihood space is the key link through which multidimensional spatial exclusion may be associated with income and expectations regarding continued residence or renewed out-migration. Contraction of industrial opportunities, thresholds to

core business forms, and seasonal fluctuation may be associated with lower income stability and risk resistance, as well as stronger expectations of out-migration [3,16,23]. Therefore:

H4. *Tourism-industry livelihood space marginalization may be negatively associated with livelihood stability and the intention to stay.*

Taken together, H1–H4 indicate that physical livelihood space exclusion may be indirectly associated with livelihood stability through the proposed sequence of social livelihood space isolation → barriers to cultural capital conversion → tourism-industry livelihood space marginalization. The four hypotheses form a hypothesized serial-association model in which physical livelihood space exclusion is the starting point, tourism-industry livelihood space marginalization is the endpoint, and social livelihood space isolation and barriers to cultural capital conversion are the sequentially transmitted intermediate mechanisms [29,30]. Therefore:

H5. *Physical livelihood space exclusion may be indirectly associated with livelihood stability through the proposed sequence of associations of social livelihood space isolation → barriers to cultural capital conversion → tourism-industry livelihood space marginalization.*

3. Methods

3.1. Study Site

Xianyukou Village is located at the entrance of the Xianyu scenic area within the Mount Hua Scenic and Historic Interest Area, Huayin City, Shaanxi Province, China. The study area covers about 253.57 ha. The village comprises approximately 114 permanent-resident households and 400 residents. The final analytical sample included 114 eligible individuals; the household count and individual sample size are numerically identical but represent different units. Tourism is the main pillar industry. The village lies at the interface between the scenic-area development system and the traditional rural living space, where external tourism capital, scenic-area governance logic, and residents' production and living spaces have long overlapped and interacted, giving it the typical characteristics of a scenic-area fringe village.

Against the background of industrial transformation and labor out-migration, Xianyukou Village has developed a demographic structure of "youth out-migrating, the middle-aged returning, and the old and young staying behind." The survey shows that people aged 45–65 account for more than 60% of the village population, over 80% of whom have out-migrant work experience. This group long worked in labor-intensive industries such as construction, manufacturing, and catering; after returning, they rely mainly on family housing, casual labor, tourism services, and a small amount of agricultural resources for their livelihoods.

3.2. Data

The four data components served distinct but complementary purposes in the sequential explanatory mixed-methods design. Questionnaire data measured the five latent constructs and provided respondent-level observations for descriptive analysis and PLS-SEM. AHP was used separately to assign relative weights to the three physical-space push–pull sub-criteria; it was not used to estimate structural paths or to weight the PLS-SEM latent constructs. Semi-structured interviews were used to interpret how the quantitative patterns were experienced in everyday livelihood practices and to identify convergent, qualifying, or divergent accounts. Spatial auxiliary data (field-survey records, official planning documents, multi-period remote-sensing images, and tourism-business points

of interest (POIs)) characterized village-level land-use change and the spatial distribution of tourism-related facilities. These spatial materials provided contextual triangulation, rather than respondent-level measurements or substitutes for questionnaire responses. The correspondence between spatial indicators and questionnaire constructs, including the limits of each data source, is summarized in Supplementary Table S1.

(1) Questionnaire data. The survey targeted older return migrant workers in scenic-area fringe villages, using a combination of random sampling and stratified snowball sampling. Eligible respondents met all the following criteria: aged 45–65 years, a widely adopted bracket for labour-active older return migrants in China [5,6], with prior urban labor experience of at least one continuous year, and returning to their registered village for long-term residence. Individuals who had never migrated out, those only returning for temporary visits, and people outside this age range were excluded. Given the generally low educational level of respondents, questionnaires were completed through face-to-face household interviews to ensure data quality. Of 122 questionnaires distributed, 114 valid questionnaires were retained, for a valid response rate of 93.4% The eligible target population totals approximately 130 individuals in the village. Missing data were handled by listwise deletion (<2% missing, no systematic pattern); no significant nonresponse bias was detected through demographic comparison with village registration records. The sample size satisfies the PLS-SEM 10-times rule.

(2) Qualitative interview data. The semi-structured interviews were conducted from April to September 2026. Using purposive sampling that accounted for livelihood type, residential area, and individual differences, 16 typical respondents were selected for semi-structured interviews lasting 30–60 min each. Transcription produced approximately 75,000 Chinese characters of interview material, which was used to explain the mechanisms underlying the quantitative patterns and to identify additional push–pull factors. Four illustrative excerpts are reported with anonymized participant codes (R3, R7, R9, and R12). The English quotations are translations of the participants' statements; potentially identifying details have been omitted while the substantive meaning has been retained.

(3) Supplementary spatial data. Four types of auxiliary data were collected: field-survey records, official planning documents, multi-period remote-sensing images, and tourism-business POIs. Field records and planning documents, together with remote-sensing interpretation where applicable, were used to characterize changes in farmland, residential plots, public space, and village land use. Tourism-business POIs were used to describe the location and distribution of tourism-related facilities. These data provide the strongest contextual correspondence with the physical and tourism-industry livelihood-space constructs. They do not directly measure social-network access, cultural-capital conversion, individual job quality, benefit distribution, or household livelihood stability; these constructs were measured by questionnaire items and explored through interviews. The indicator-to-construct mapping is provided in Supplementary Table S1.

3.3. Variables and Measurement

The five core latent variables are the physical livelihood space, social livelihood space, cultural livelihood space, tourism-industry livelihood space, and livelihood stability and intention to stay, measured with 35 items in total (Table 1). All items used a five-point Likert scale; some positively worded items were reverse-coded before model computation to ensure consistent variable direction.

Table 1. Overview of the core latent variables.

Variable Type	Variable Name	Items	Core Measurement Dimensions
Exogenous	Perceived physical livelihood space	6	Changes in production land; public-space supply; suitability of housing for business; bias in facility allocation; accessibility of public services
Mediator 1	Perceived social livelihood space	8	Estrangement of interpersonal networks; access to policy information; sense of community belonging; public decision-making participation; business access thresholds
Mediator 2	Perceived cultural livelihood space	10	Local cultural resources; cultural-participation channels; cultural-tourism institutional thresholds; ability to monetize one's own culture
Mediator 3	Perceived tourism-industry livelihood space	6	Employment stability; benefit-distribution pattern; thresholds to core business forms; job income level; seasonal industrial fluctuation
Endogenous outcome	Livelihood stability and intention to stay	5	Income stability; risk-resistance capacity; confidence in livelihood development; long-term intention to stay; probability of out-migrating again

3.4. Data Analysis Methods

This study adopts a sequential explanatory mixed-methods design, with integration occurring at the design, analysis, and interpretation stages [31]. At the design stage, questionnaire items, interview topics, AHP criteria, and spatial materials were organized around the four-dimensional physical, social, cultural, and tourism-industry livelihood-space framework. At the quantitative-analysis stage, the 114 valid questionnaires were used for descriptive analysis and PLS-SEM to assess the measurement model and estimate the hypothesized associations among the five latent constructs. AHP served a separate prioritization function by weighting the three physical-space push–pull sub-criteria and calculating a composite balance index; its weights were not entered into the PLS-SEM model. At the qualitative-analysis stage, the 16 interviews were used to explain the mechanisms underlying the statistical associations and to identify experiences that confirmed, qualified, or diverged from the quantitative patterns. At the interpretation stage, the interview excerpts and spatial context were compared with the survey and PLS-SEM results in a joint display. This integration distinguishes respondent-level statistical associations from village-level spatial evidence and avoids treating the two levels as interchangeable [32].

For quantitative analysis, SPSS 26.0 was used for descriptive statistics such as sample characteristics, means, and standard deviations. To address common method bias (CMB) from a single source, procedural controls and statistical tests were combined: at the questionnaire-design stage, anonymous responses, separation of item order, and reverse items reduced respondent consistency bias [33]; at the analysis stage, Harman's single-factor test and a full collinearity VIF test were combined to assess CMB risk [33,34]. If the first unrotated factor accounts for less than 50% of the total variance and the VIF values of all latent variables are below 3.3, CMB is not considered a serious threat [34].

A partial least squares structural equation model (PLS-SEM) was then constructed in SmartPLS 4.0 [35]. Given the relatively limited sample ($n = 114$), the multiple mediation

relationships, and the possibility that the data do not meet multivariate normality, PLS-SEM is more suitable than covariance-based SEM for the exploratory and predictive objectives of this study [36,37]. Measurement-model assessment included Cronbach's alpha, composite reliability (CR), and rho_A for internal consistency reliability; standardized loadings and the average variance extracted (AVE) for convergent validity [38,39]; and the Fornell–Larcker criterion and the HTMT ratio for discriminant validity. Structural-model assessment reports path coefficients, the coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), and the standardized root mean square residual (SRMR) [36,40]. Because all constructs were measured in a single survey wave, indirect paths are interpreted as statistical associations, not evidence of temporal mediation or causal direction.

AHP weighting and consistency assessment. Five experts independently conducted pairwise comparisons using Saaty's 1–9 fundamental scale, and their judgments were aggregated element by element using the geometric mean. The panel comprised three university researchers from the School of Architecture, Xi'an University of Architecture and Technology, whose research focuses on urban–rural planning and rural-tourism geography and who had 8–15 years of experience researching rural spatial restructuring and community livelihoods; one senior planner from a local urban–rural planning and design institute, with 10 years of experience in village-level tourism master planning and design; and one practitioner from the Huashan Scenic Area Management Committee, with 7 years of experience in rural-tourism governance and community-livelihood project management. The AHP hierarchy retained a target–criterion–sub-criterion structure, with two criterion-level dimensions: productive space and living space. Productive space contained two sub-criteria (core business exclusion and farmland severance), whereas living space contained one sub-criterion (housing business potential). Accordingly, two 2 × 2 reciprocal comparison matrices were required: one comparing productive and living space at the criterion level, and one comparing core business exclusion and farmland severance within productive space. The living-space branch contained only one sub-criterion and therefore required no further pairwise-comparison matrix. The global weights retained in this study were 0.40 for core business exclusion, 0.25 for farmland severance, and 0.35 for housing business potential. These correspond to criterion weights of 0.65 for productive space and 0.35 for living space; within productive space, the local weights were 0.6154 and 0.3846, respectively, while the sole living-space sub-criterion had a local weight of 1.000. The criterion-level weight-equivalent matrix (productive space vs. living space) is [[1, 1.8571], [0.5385, 1]], and the productive-space sub-criterion matrix (core business exclusion vs. farmland severance) is [[1, 1.6000], [0.6250, 1]]. These are the reciprocal-matrix representations of the retained priority ratios and are reported in Supplementary Table S2. For any reciprocal 2 × 2 matrix, $\lambda max = 2$ and $CI = (\lambda max - n)/(n - 1) = 0.000$ by construction. Because the Saaty random index for $n = 2$ is $RI_2 = 0$, the *ratio* $CR = CI/RI$ is formally indeterminate (0/0); *CR* is conventionally displayed as 0.000 here to denote the absence of inconsistency in a 2 × 2 reciprocal matrix, not as evidence of unusually perfect expert scoring. This automatic consistency property should not be interpreted as a test of inter-expert agreement. The overall weights were then applied to the measured scores (1–5) to calculate the weighted push and pull scores.

To test mediation and serial mediation, bias-corrected bootstrapping with 5000 resamples was used, with significance determined by whether the 95% confidence interval included zero [29,41]. Specific indirect paths were decomposed to identify the key transmission links among the physical, social, cultural, and tourism-industry dimensions [42]. For qualitative analysis, interview data were imported into NVivo 12 and coded to identify themes concerning access to physical resources, social ties and information, cultural-resource use, and participation in the tourism industry [42,43]. Interview evidence was

compared with quantitative findings on a construct-by-construct basis: evidence was considered convergent when it reflected the same pattern, qualifying when it revealed a condition or limitation not captured by an aggregate score or path coefficient, and divergent when it contradicted the dominant quantitative pattern. The supplied excerpts provide convergent and qualifying evidence; they do not, by themselves, establish whether contradictory or negative cases were absent from the full set of 16 interviews. The full transcripts should therefore be reviewed for divergent cases before the final manuscript makes any claim about their absence. Spatial triangulation was restricted to indicators with a defensible correspondence to the constructs, principally land use, plot location, public-space conversion, and tourism-facility distribution [44]. AHP was used only to prioritize the physical-space sub-criteria [45,46] while remote sensing, POIs, and planning documents were used as village-level context rather than direct measures of the social, cultural, or livelihood-outcome constructs [47].

4. Results

4.1. Sample Demographics and Livelihood Space Conditions

4.1.1. Sample Demographic Characteristics

Overall, older return migrant workers form the main body of the permanent rural population in Xianyukou Village, and their characteristics closely match those of the first-generation out-migrant workers. The group displays five typical features: an older age profile, low human capital, low income, and empty-nest status and long urban work tenure (Figure 2).

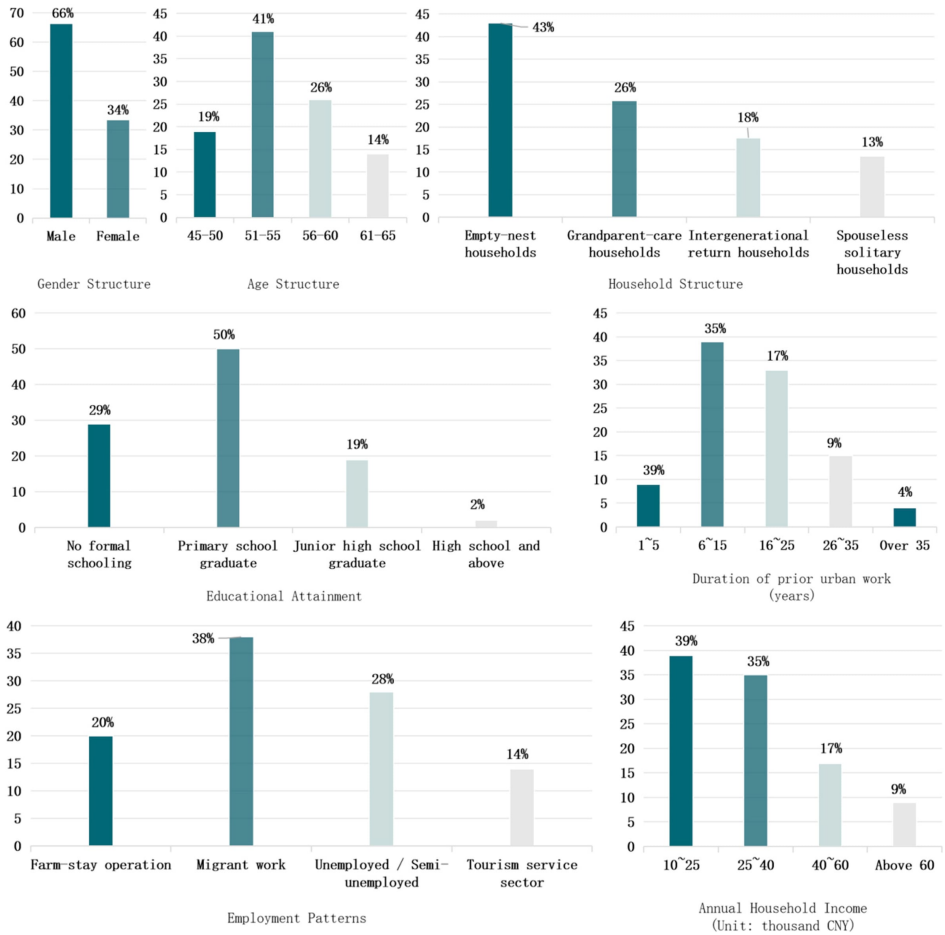


Figure 2. Demographic profile of the sampled older return migrant workers in Xianyukou Village.

4.1.2. Physical Livelihood Space

The physical livelihood space is the concrete carrier through which older return migrant workers conduct livelihood activities and the initial triggering dimension of the spatial-exclusion transmission chain. This study characterizes the situation along three dimensions—productive space, living space, and public space and services [48,49]; productive and living spaces are the core dimensions for the subsequent AHP identification of push–pull factors, while public space serves as an auxiliary reference. The results show that tourism-driven spatial restructuring has overall squeezed the physical-space rights of older return migrant workers, producing marked marginalization (Table 2) [50].

Table 2. Marginalization of the physical livelihood space among older return migrant workers in Xianyukou Village.

Dimension	Core Indicator	Survey Finding	Marginalization Manifestation
Farmland resources	Per-capita farmland	Per-capita farmland of older return migrant workers: 0.21 mu	Collapse of the traditional farming base; minimal income contribution from agriculture
	Land expropriation	61.3% of farmland expropriated; farmland fully or partly expropriated in 82.5% of households	
	Farm employment	Farm employment: 7.0%; farm income share: <5%	
Core tourism businesses	Operator composition	Only 5.3% of older return migrant workers run independent tourism businesses	High entry barriers to core businesses; exclusion from high-return business space
	Street-front conversion	78.2% of street-front residential plots converted for tourism	
	Rent disparity	Street-front rent: RMB 32,000/courtyard/yr, 6.8 times the non-street-front level	
Residential land	Plot location	89.1% of return-migrant households on non-street-front plots	Blocked housing assetization; living costs squeeze livelihood space
	Living cost	12.3% forced to rent temporary housing due to rising rents	
Public space and services	Public-space conversion	72% of original public space converted to tourism facilities	Dual exclusion from public participation and welfare access
	Activity participation	Public-activity participation: 21.1%, 43.6 percentage points below local villagers	
	Welfare coverage	19.3% unable to access village-collective public welfare	

These findings indicate that the tourism-oriented restructuring of the physical space in Xianyukou Village follows an allocation logic of business first, capital first, and established residents first [51]. As latecomers, older return migrant workers occupy a marginal position in the allocation of means of production, business carriers, living space, and public resources [52].

4.1.3. Social Livelihood Space

The social ties of the interviewed older return migrant workers show three shortcomings: kin and peer-worker ties, cross-class neighborhood ties, and communication with the village collective. At the kin and peer-worker level, respondents rely on a small mutual-aid circle of spouses, children, and co-workers; only 27.2% can obtain substantial help from relatives or friends during unemployment or illness, and these limited support networks provide insufficient protection against major livelihood shocks such as serious disease or job loss. There is marked cross-class neighborhood estrangement: 68.4% rarely exchange industrial information such as land transfer and tourism employment with large village operators, blocking the transmission of key resources. Regarding public ties with the village collective, 72.8% had never received notices of industrial training or collective dividends and 65.1% had never joined tourism-related village affairs; older return migrant workers lack stable channels to express their views.

Overall, cross-class neighborhood estrangement and poor communication with the village collective are the two most salient problems. Relying solely on kin and co-worker circles cannot close the social-capital deficit; inadequate social and public ties greatly narrow tourism income channels and ultimately produce the social-integration dilemma of older return migrant workers, an important social source of their livelihood vulnerability.

4.1.4. Cultural Livelihood Space

Backed by Mount Hua to the north, Xianyukou Village possesses high-quality natural, historical, and cultural resources and has earned titles such as "Beautiful Village," "National Forest Village," and "National Key Rural Tourism Village." Cultural-resource development remains at the superficial level of landscape sightseeing; historical relics and cultural symbols are not deeply integrated with village tourism products, and the economic value of these cultural resources remains underdeveloped. The village hosts 35 intangible cultural heritage (ICH) items at the provincial level or above, most still in their original state. The survey shows that fewer than 2% of older return migrant workers can combine the traditional skills they hold with tourism business; the channel for converting cultural capital into economic capital is highly constrained.

4.1.5. Tourism-Industry Livelihood Space

The tourism-industry livelihood space depends heavily on Mount Hua tourism, forming a structure dominated by the tertiary sector, with a weakened primary sector and no secondary sector. Farmhouse tourism businesses (nongjiale) businesses are currently the main tourism business carrier, but their scale has clearly contracted: the number of operators fell from 71 in 2019 to 25 at the time of the survey. Existing businesses are mainly small family operations of the "combined storefront-and-residence operations" type, providing catering and basic accommodation with highly homogeneous products. Collaboration and risk-sharing among operators are limited and they are sensitive to external tourist flows and market changes; given the sharp pronounced peak- and off-season fluctuations, both businesses and labor incomes fluctuate substantially.

Overall, tourism has expanded the economic scale of the tertiary sector, but the gains have not translated into stable, high-quality livelihood opportunities for older return migrant workers. The high dependence on tourism, business fluctuation, unequal benefit distribution, and skill mismatch together shape a tourism-industry livelihood space characterized by peripheral participation, channeling this group mainly into low-skill, low-return, and low-protection jobs and limiting their ability to rebuild livelihoods through tourism.

4.2. Push–Pull Factors of the Physical Livelihood Space

Focusing on productive and living spaces, this study used AHP to build a three-level evaluation system comprising target, criterion, and sub-criterion layers [46]. Five experts' pairwise judgments were aggregated using the geometric mean. The criterion-level priorities were 0.65 for productive space and 0.35 for living space. Within productive space, the local weights were 0.6154 for core business exclusion and 0.3846 for farmland severance; housing business potential was the sole sub-criterion under living space and therefore had a local weight of 1.000. The resulting global weights were 0.40, 0.25, and 0.35, respectively (Table 3). The two weight-equivalent 2 × 2 reciprocal matrices are automatically consistent ($\lambda max = 2$; $CI = 0.000$); CR is reported as 0.000 by convention because the random index for $n = 2$ is zero and the ratio is not informative for a 2 × 2 matrix. Applying the global weights to the measured scores (1–5) gives $S_push = 0.40 \times 4.5 + 0.25 \times 4.0 = 2.80$ and $S_pull = 0.35 \times 2.0 = 0.70$. The push–pull balance index is $B = S_push/(S_push + S_pull) = 2.80/(2.80 + 0.70) = 0.800$; because $B > 0.5$, the physical livelihood space remains push-dominated. This result indicates that core-business exclusion and farmland severance jointly constitute the principal push forces, whereas the potential pull associated with housing business remains limited [3,53].

Table 3. Weights and measured scores of the core push–pull factors in the physical livelihood space.

Sub-Criterion Indicator	Dimension	Weight	Score	Push/Pull
Core business exclusion	Productive space	0.40	4.5	Push
Farmland severance	Productive space	0.25	4.0	Push
Housing business potential	Living space	0.35	2.0	Pull
Overall pull score	—	—	0.70	Pull
Overall push score	—	—	2.80	Push
Balance index B	—	—	0.80	Push-dominated

4.3. Push–Pull Factors of the Social Livelihood Space

Drawing on the classic three-dimensional social-capital paradigm of Woolcock and Narayan (2000) [12], with bonding, bridging, and linking social capital as the theoretical core, exploratory factor analysis (EFA) was applied to the eight perceived items of the social livelihood space. We empirically matched its extracted common-factors to this theoretical typology to quantitatively identify the constituent dimensions of social isolation and to estimate the effect of each type of social capital on the social inclusion of older return migrant workers. These three EFA-produced scores were entered into the PLS-SEM model to obtain standardized path coefficients. Bonding social capital had a coefficient of 0.417 ($p < 0.001$), the strongest positive effect on alleviating isolation; bridging social capital a coefficient of 0.263 ($p < 0.01$), a moderate positive effect on inclusion; and linking social capital a coefficient of only 0.128 ($p < 0.05$), the weakest positive effect [54] (Table 4).

Table 4. Varimax-rotated component matrix of the social livelihood space scale.

Item	Social-Isolation Push (F1)	Social-Inclusion Pull (F2)	Dimension
Social estrangement from villagers after out-migration	0.831	0.101	Social push
Informal barriers for tourism-related business	0.805	0.094	Social push
Fair consideration of villagers' opinions in public governance	0.782	0.115	Social push
Equal access to policy supports under identical conditions	0.759	0.082	Social push
Timely support from family and close neighbours	0.102	0.836	Social pull
Mutual assistance among returning peers	0.084	0.812	Social pull
Timely access to collective policy information	0.110	0.788	Social pull
Sense of community belonging	0.091	0.771	Social pull

Note: Only loadings >0.4 are shown; values below 0.4 are omitted.

4.4. Push–Pull Factors of the Cultural Livelihood Space

Using a cultural-dimension push–pull framework built on Bourdieu's cultural-capital theory [27] (pp. 81–93), combined with EFA and a push–pull balance model, ten culture-specific five-point Likert items with no cross-dimensional interference were used to quantitatively analyze the 114 valid questionnaires, producing the full results of factor extraction, dimension division, and spatial imbalance. Factor analysis extracted two stable factors, cultural endogenous push and cultural endogenous pull, with a cumulative variance explained of 82.15%. Cultural push was reflected mainly in inadequate channels for displaying quality culture, institutional access thresholds, control of cultural resources, and restricted identity expression; cultural pull came from vernacular skills, place identity, and the cultural resources themselves. The overall cultural pull score was 2.13 and the push score 4.27, with a balance index of 0.49, further indicating that the cultural space is likewise push-dominated (Table 5).

Table 5. Varimax-rotated component matrix of the cultural livelihood space scale.

Item	Cultural Endogenous Push (F1)	Cultural Endogenous Pull (F2)	Dimension
Commercial erosion of indigenous folk customs	0.824	0.103	Cultural push
Monopolization of cultural display and operational channels	0.801	0.097	Cultural push

Table 5. *Cont.*

Item	Cultural Endogenous Push (F1)	Cultural Endogenous Pull (F2)	Dimension
Skill barriers for cultural-tourism project application	0.786	0.121	Cultural push
Shortage of inheritors for traditional folk skills	0.763	0.085	Cultural push
Older return migrant workers excluded from cultural-tourism decision-making	0.747	0.116	Cultural push
Inability to monetize folk skills through tourism	0.732	0.092	Cultural push
Possession of local folk-heritage skills	0.105	0.841	Cultural pull
Low-cost access to local cultural-heritage resources	0.088	0.816	Cultural pull
Relaxed cultural-tourism operational thresholds for older return migrant workers	0.112	0.793	Cultural pull
Sense of belonging to local vernacular culture	0.095	0.775	Cultural pull

Note: Only loadings >0.4 are shown; values below 0.4 are omitted.

4.5. Push–Pull Factors of the Tourism-Industry Livelihood Space

The push–pull factors of the tourism-industry livelihood space center on employment opportunities, benefit distribution, access to core business forms, and employment stability. Questionnaire and interview results show that tourism provides some local employment for older return migrant workers, but benefits are concentrated among a few operators, core business forms carry high entry barriers, and existing jobs offer limited income and stability under marked seasonal fluctuation. The industrial space therefore exhibits the features of opportunities existing but participation restricted, and industry expanding but benefits unbalanced; the overall push stems mainly from barriers to industrial access and benefit acquisition, further manifesting as tourism-industry marginalization (Table 6).

Table 6. Mention Frequency Distribution of Push and Pull Factors in the Tourism-Industry Livelihood Space.

Core Factor	Mention Frequency	Dimension
Industrial opportunity embedding	20	Industry Pull
Benefit sharing	35	Industry Pull
Benefit-distribution exclusion	41	Industry Push
Core-business entry barrier	45	Industry Push
Low-quality, unstable employment	65	Industry Push
Seasonal industrial fluctuation	61	Industry Push

4.6. Integration of Quantitative, Interview, and Spatial Evidence

Table 7 brings together the statistically estimated paths, interview excerpts, and available spatial or contextual indicators. The first two excerpts converge with the proposed transmission mechanism by illustrating how residential location and weak information

links are associated with social distance and restricted access to cultural-tourism training. The third excerpt qualifies the interpretation of industrial marginalization: older return migrant workers are not wholly excluded from tourism employment, but are concentrated in peripheral tasks rather than core businesses. The fourth excerpt further qualifies the push-dominated result by showing that tourism generates seasonal work, while the short peak season and long off-season undermine income continuity. The current four excerpts provide convergent and qualifying evidence; no clear contradictory case is represented among them. The full interview corpus should be checked before concluding that no contradictory or negative case exists. Spatial indicators corroborate the physical and tourism-business context but cannot establish the respondent-level paths or their temporal order.

Table 7. Joint display integrating PLS-SEM paths, interview evidence, and spatial context.

Quantitative Result	Interview Evidence (Anonymized Translated Excerpts)	Spatial/Contextual Evidence and Integrated Interpretation
Physical exclusion → social isolation	"We moved back to the village but live on the west side, far from the main street. People who run the big restaurants on the street don't really talk to us." (R7, male, 52, returned from construction work in Xi'an) Interpretation: This account is consistent with the association between peripheral residential location and weaker cross-class interaction.	Context: 89.1% of return-migrant households are on non-street-front plots; 78.2% of street-front residential plots were converted for tourism; 72% of original public space was converted to tourism facilities. These indicators contextualize spatial separation but do not independently test the respondent-level path.
Social isolation → failed cultural conversion	"I can make wooden carvings; my dad taught me. But who would buy that? The village committee never told us about any cultural tourism training programs." (R3, female, 58, returned from factory work in Guangdong) Interpretation: This account supports the information-access mechanism and illustrates how a skill may remain unconverted when training and market channels are inaccessible.	Context: the village has 35 ICH items at provincial level or above, while fewer than 2% of respondents reportedly combine traditional skills with tourism business. The ICH inventory indicates resource availability, not equal access to training or monetization.
Failed cultural conversion → industrial marginalization	"The homestays on the main street are run by people from outside or the big local families. We can only do odd jobs—cleaning, washing dishes, helping with deliveries." (R12, male, 49, returned from catering work in Beijing) Interpretation: This account illustrates segmentation between core-business ownership and peripheral employment, providing qualitative detail on tourism-industry marginalization.	Context: only 5.3% of older return migrant workers run independent tourism businesses; farmhouse operators declined from 71 in 2019 to 25 at the survey time. These figures describe business access/contraction, not individual cultural-capital conversion.

Table 7. *Cont.*

Quantitative Result	Interview Evidence (Anonymized Translated Excerpts)	Spatial/Contextual Evidence and Integrated Interpretation
Industrial marginalization → livelihood stability	"Tourism is busy for only three months a year. The rest of the time there's nothing to do. Sometimes I think about going back to the city to work again." (R9, male, 55, returned from logistics work in Shanghai) Interpretation: This account qualifies rather than contradicts the quantitative result: tourism provides work, but seasonal concentration limits year-round income continuity.	Context: the manuscript reports pronounced peak/off-season fluctuation and a decline in farmhouse operators from 71 to 25. POIs can describe facility distribution, but cannot directly measure job quality, income security, or intention to migrate.
Serial indirect association	Taken together, the four excerpts provide convergent and qualifying accounts of the proposed mechanism. R7 and R3 illustrate the physical/social and social/cultural links; R12 details exclusion from core tourism businesses and concentration in peripheral jobs; R9 qualifies the interpretation by showing that tourism employment exists but is highly seasonal. These selected excerpts do not, by themselves, establish the absence of divergent cases in the full interview corpus.	The spatial data chiefly corroborate the physical and tourism-business context. They cannot verify the temporal sequence among social isolation, cultural-capital conversion, and industrial marginalization. The cross-sectional model supports an indirect association, not strict temporal causality.

5. Discussion

5.1. Proposed Serial Indirect-Association Pattern of the Endogenous Push Forces

PLS-SEM was used to estimate the hypothesized serial indirect association. In SmartPLS 4.0, based on the 114 questionnaires and using 5000 bias-corrected bootstrap resamples to obtain robust parameters, the study examined the hypothesized sequence of associations: physical space exclusion → social space isolation → failed cultural capital conversion → tourism-industry marginalization → livelihood stability.

5.1.1. Measurement Model and Overall Model Fit

The tests were conducted at two levels, model fit and scale quality, while controlling for common method bias (Table 8). Overall fit showed SRMR = 0.069 < 0.08 and $Q^2 > 0$ for all endogenous variables, indicating a an acceptable level of model fit. For reliability, Cronbach's alpha, rho_A, and CR of all latent variables exceeded 0.7; for convergent validity, all item loadings exceeded 0.7 and AVE exceeded 0.5; and discriminant validity passed both the Fornell–Larcker and HTMT tests, with no evident collinearity.

Table 8. Reliability and convergent validity of the measurement model

Latent Variable	Cronbach's α	CR	AVE
Physical space exclusion	0.812	0.867	0.521
Social space isolation	0.845	0.889	0.543
Cultural capital conversion failure	0.871	0.904	0.518

Table 8. *Cont.*

Latent Variable	Cronbach's α	CR	AVE
Industrial space marginalization	0.803	0.858	0.552
Livelihood stability	0.796	0.852	0.537

Note: All loadings >0.7, $p < 0.001$. CR = composite reliability; AVE = average variance extracted.

Discriminant validity held per the Fornell–Larcker criterion and HTMT ratios (<0.85). All VIF values were below 2.3, indicating no severe collinearity or common method bias.

To avert common method bias, the questionnaire used anonymous, modularized items with alternating positive and reverse wording; the post-hoc Harman single-factor test gave a first-factor explanation of only 32.67%, below the 50% threshold, so the data support the subsequent path analysis.

5.1.2. Path Associations Across the Four-Dimensional Livelihood Space

Path significance and indirect effects were estimated using bias-corrected bootstrapping with 5000 resamples in SmartPLS 4.0 (Table 9). Exact *p*-values and 95% bias-corrected confidence intervals (CI) are reported; an effect is considered statistically significant if its 95% CI does not contain zero.

The standardized coefficients of all four hypothesized adjacent associations reached statistical significance, which is consistent with the proposed theoretical ordering. Because cross-sectional data were used, these results reveal theoretically grounded serial associations and empirically supported indirect paths rather than strict temporal causal chains. The specific inter-dimensional paths are as follows.

First, physical space exclusion was significantly and positively associated with social space isolation ($\beta = 0.523$, $p < 0.001$). This suggests that tourism-related land expropriation and public-space encroachment may weaken households' basic living field, and may be associated with greater detachment from neighborhood and village-governance networks; restructuring of the physical survival carrier may be associated with social marginalization.

Second, social space isolation was significantly and positively associated with failed cultural capital conversion ($\beta = 0.386$, $p < 0.001$). This is consistent with the view that social networks are relevant to access to information and institutional resources: the combined absence of bonding, bridging, and linking capital may lower the efficiency of obtaining cultural-tourism training and market information, hindering the conversion of skills accumulated through prior employment into cultural resources that can be used in tourism-related activities and indicating a strong dependence of cultural capital monetization on social networks.

Third, failed cultural capital conversion was significantly and positively associated with tourism-industry marginalization ($\beta = 0.319$, $p < 0.01$). This indicates that blocked cultural monetization channels may be associated with higher entry barriers to high-threshold businesses such as homestays and specialty cultural tourism, and may contribute to greater reliance on low-wage temporary jobs among older return migrant workers.

Fourth, tourism-industry marginalization was significantly and negatively associated with livelihood stability ($\beta = -0.472$, $p < 0.001$). The imbalance in tourism employment and benefit-distribution power may be associated with lower older return migrant workers' income stability and risk resistance. Regarding direct associations, physical space exclusion showed only a weak negative direct association on livelihood stability ($\beta = -0.104$, $p < 0.05$), The direct effects of social isolation and barriers to cultural capital conversion on livelihood stability were not statistically significant, whereas tourism-industry marginalization showed a significant negative direct association on livelihood stability. This is consistent with the

interpretation that livelihood vulnerability may be associated with serial indirect patterns; no single dimension alone appears to account for long-term residence intention, and the cumulative interaction of multiple dimensions may form a mutually reinforcing pattern of disadvantage.

Importantly, this sequence is not the only path; reverse and feedback associations are also plausible. For example, industrial marginalization may produce social isolation (low incomes and low-end jobs in turn restrict social circles); network strength may in turn determine access to physical resources (e.g., obtaining street-front plots or business qualifications through ties); and income instability may weaken public-participation willingness. The proposed physical → social → cultural → industrial sequence is therefore one empirically supported indirect association consistent with the theoretical ordering, rather than an exclusive causal chain. Future research using longitudinal data should examine the dynamic mutual constitution and causal direction among the dimensions.

Table 9. Standardized coefficients of the four-dimensional serial paths.

Path	Standardized β	Bootstrap SE	Bias-Corrected 95% CI [LL, UL]	Exact *p*
Physical exclusion → social isolation	0.523	0.061	[0.402, 0.634]	$p < 0.001$
Social isolation → failed cultural conversion	0.386	0.070	[0.247, 0.513]	$p < 0.001$
Failed cultural conversion → industrial marginalization	0.319	0.083	[0.151, 0.476]	0.002
Industrial marginalization → livelihood stability	−0.472	0.076	[−0.613, −0.320]	$p < 0.001$
Physical exclusion → livelihood stability	−0.104	0.052	[−0.206, −0.012]	0.028
Physical exclusion → Social isolation → Barriers to cultural capital conversion → Tourism-industry marginalization → Livelihood stability	−0.030	0.014	[−0.061, −0.008]	0.011

Note: Bootstrap resamples = 5000 (bias-corrected). Because cross-sectional data were used, the coefficients reflect theoretical associations and indirect effects rather than strict longitudinal causal inference.

5.1.3. Endogenous Push Forces in the Proposed Serial-Association Pattern

For older return migrant workers in scenic-area fringe villages, returning does not mean the end of livelihood problems; it may instead mark the beginning of a new round of livelihood vulnerability. Traditional push–pull theory can explain the occurrence of return but not why migrants still cannot stably embed themselves in rural development afterward. Tourism development has shaped a new spatial interest pattern, and the village as the destination of return may also generate endogenous push forces within the village. These do not stem from direct inducements to out-migrate again but from the multidimensional exclusion older return migrant workers encounter locally: farmland loss, functional conversion of residential land, and the priority occupation of public resources by tourism businesses may constrain their physical livelihood support, while reorganization of social networks, blocked cultural capital conversion, and rising industrial participation thresholds

may further constrain their capacity for local livelihood re-embedding. Thus, although older return migrant workers have returned to the village, they may remain incompletely integrated into the development structure, contributing to the characteristic dilemma of returning without being home.

5.2. Structural Superposition of Multidimensional Exclusion and the Post-Return Extension of Push–Pull Theory

This study further shows that the livelihood dilemma of older return migrant workers may not be attributable to any single dimension alone but may be associated with multidimensional exclusion that are theoretically ordered and may interact (Figure 3). This pattern offers the structural roots of difficulty in sustaining livelihoods after return and provides empirical evidence for extending push–pull theory to the post-return stage.

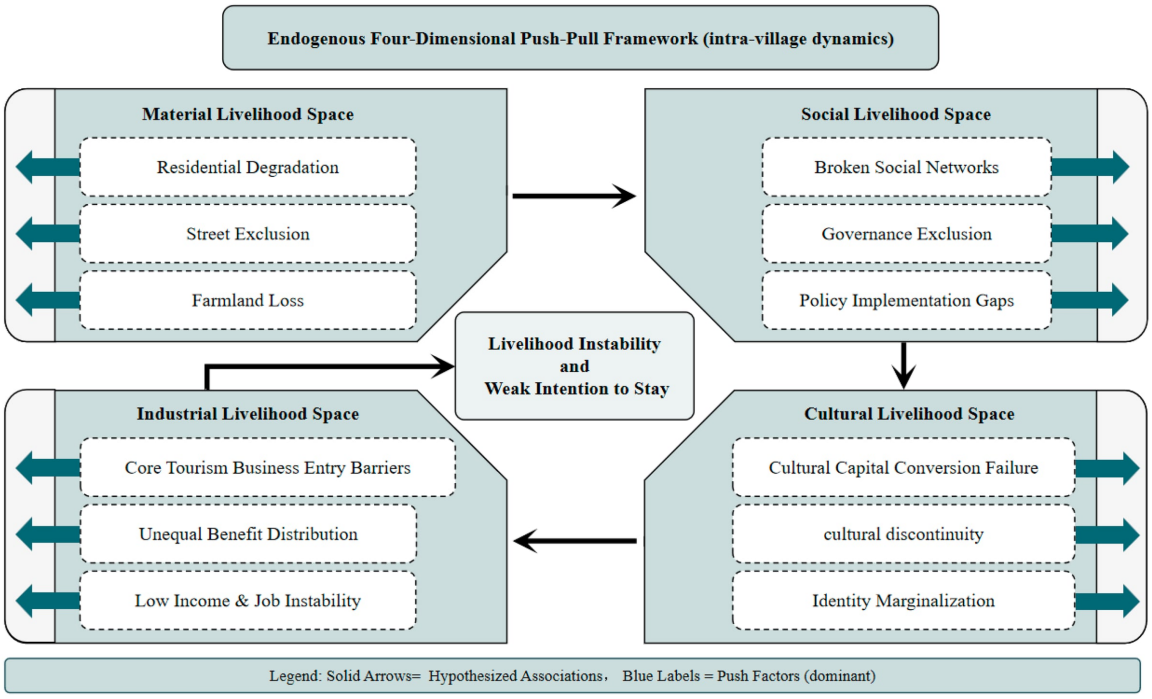


Figure 3. The endogenous-push exclusion chain across the four-dimensional livelihood space.

First, physical space exclusion can be viewed as a starting point of cumulative deprivation, essentially a mismatch between tourism-oriented spatial capitalization and the livelihood needs of older return migrant workers of the older group. In tourism development, scenic-area fringe villages allocate spatial resources first to landscape enhancement and commercial uses, potentially constraining access to the land, housing, and public space on which older return migrant workers depend for basic livelihoods. Unlike the new generation, older return migrant workers (45–65) possess very limited human and financial capital, and their reliance on land and acquaintance networks is existential. Where tourism restructuring weakens these ties, their livelihood foundation may also be undermined. This spatial compression may constrain their traditional farming and low-threshold family businesses of a physical base.

Second, complex cumulativeness and mutual constitution among the dimensions may form a mutually reinforcing pattern of disadvantage. Physical exclusion may also be reflected beyond resource possession in the social, cultural, and industrial dimensions. On one hand, tourism-led restructuring may reshape interpersonal networks, potentially limiting older return migrant workers' access to core-business and information-exchange

networks and contributing to social isolation. On the other hand, although the group holds local knowledge, this cultural capital may not automatically become a tradable tourism resource and may remain difficult to convert amid institutional thresholds and market-recognition bias. Notably, this transmission is not a strictly unidirectional process: industrial marginalization (e.g., being confined to low-wage temporary jobs) may in turn be associated with more limited social circles, and social isolation (e.g., lack of cross-class neighborhood interaction) may further reinforce physical-space marginalization (e.g., inability to obtain information on street-front plot transfers). The interweaving of exclusion may leave older return migrant workers at the periphery of rural industry.

Third, the theoretical contribution lies in revealing the generative logic of the endogenous push force within the village and extending the application boundary of push–pull theory. Classic push–pull theory is used mainly to explain migration decisions under the urban–rural dual structure and implicitly assumes that the village is a homogeneous pull field. The case findings suggest that tourism-driven restructuring may be associated with marked spatial differentiation within the village. For advantaged groups such as established large operators and return entrepreneurs, the village remains a pull; for older return migrant workers, endogenous push forces may have emerged within the village, arising not from direct inducements to out-migrate again but from the superposition of local multidimensional exclusion. Although they have returned to the village, they may remain incompletely integrated into the development structure, contributing to the dilemma of returning without being home. This study therefore advances the analytical perspective of the village-level endogenous push forces, extending push–pull theory from the migration-decision stage of whether to return to the long-term livelihood-rebuilding stage of whether one can sustain stable livelihoods after returning.

Fourth, this pattern suggests that the disadvantaged position of older return migrant workers is not the natural result of individual inadequacy but may be associated with the accumulation of multidimensional exclusion during spatial restructuring. Planning and governance in scenic-area fringe villages therefore urgently need to shift from a tourism-growth orientation to inclusive rural tourism and livelihood governance. In physical space, a secondary distribution mechanism for land-transfer benefits should be established and low-threshold business space retained in non-street-front areas. In social space, cross-class public interaction spaces should be rebuilt to break information islands. In cultural space, platforms linking ICH transmission with tourism business should be created so that the local knowledge of older workers can be converted into economic value. In industrial space, non-core but stable tourism support jobs suited to middle-aged and older workers should be developed, enabling them to obtain sustainable livelihood opportunities within the rural industrial system.

Beyond these village-level measures, support from central and local governments is also essential. At the national level, relevant policies should better address the livelihood needs of older return migrant workers through improved employment support and social protection. At the local level, governments should provide accessible vocational training, timely information on tourism-related job opportunities, and support for participation in local tourism businesses [55]. These measures should be tailored to older returnees' needs and willingness to participate.

6. Conclusions

Taking Xianyukou Village at the fringe of the Mount Hua scenic area in Shaanxi Province as the case, and drawing on 114 questionnaires, 16 semi-structured interviews, and multi-source spatial auxiliary data, this study used a sequential explanatory mixed-methods

design to examine the associations between tourism-driven rural spatial restructuring and the livelihood stability of older return migrant workers. Three core conclusions emerge.

First, the four-dimensional livelihood space is overall in a push-dominated state of imbalance. In physical space, core-business exclusion and farmland severance constitute the main pressures and the business potential of housing is not effectively released; in social space, older return migrant workers depend heavily on kin and peer-worker ties, with insufficient cross-class interaction and formal institutional links; in cultural space, institutional thresholds and resource occupation are associated with barriers to converting local cultural capital; and in industrial space, high dependence on tourism, contracting business scale, and job downgrading coexist. These conditions may collectively constrain the livelihood opportunities of older return migrant workers.

Second, multidimensional exclusion exhibits theoretically grounded serial associations and empirically supported indirect paths. PLS-SEM identifies statistically significant associations along the hypothesized sequence of physical exclusion → social isolation → failed cultural conversion → industrial marginalization → reduced livelihood stability, with all adjacent associations statistically significant ($\beta = 0.523$, 0.386, 0.319, and -0.472, all significant). The direct association between physical exclusion and livelihood stability is weak ($\beta = -0.104$, $p < 0.05$), a pattern consistent with livelihood vulnerability being associated with cumulative and interacting constraints across dimensions. This transmission is not a unidirectional, inevitable causal chain; reverse and feedback associations may also exist among the dimensions, and cross-sectional data are consistent with a theoretically posited indirect association.

Third, the case findings suggest that endogenous push forces may emerge within the village and may contribute to the post-return dilemma of difficulty in sustaining livelihoods after return. Tourism-driven spatial capitalization suggests that the village may no longer be a homogeneous return pull field. For older return migrant workers with limited capital and skills, the village that should serve as the return receiver may contain multidimensional endogenous push forces, including land and housing exclusion, social-network breakdown, cultural capital failure, and barriers to entering the tourism sector. Although they have returned to the village, they may remain incompletely integrated into the development structure and may experience secondary marginalization from urban labor-market marginality to marginality within the rural tourism economy.

This study has several limitations. First, although theoretical reasoning and bootstrap tests reveal serial associations and indirect paths, cross-sectional data cannot strictly establish temporal causality; future work should use longitudinal data to test the dynamic mutual constitution and causal direction among dimensions [56]. Second, as a single-case study, the conclusions explain the spatial mechanism of a particular type of scenic-area fringe village rather than offering statistical generalization across all rural tourism areas; comparative studies of multiple types of fringe villages are warranted. Third, the sample is relatively limited ($n = 114$) and focused on the older group; future research could enlarge the sample and add intergenerational comparison with new-generation older return migrant workers to clarify livelihood space differences and policy boundaries across age cohorts. Fourth, the spatial auxiliary data in this study primarily supplement the characterization of village-level spatial patterns, while the integration of objective spatial indicators with household-level livelihood perceptions remains limited. Future research could combine remote sensing and land-use indicators with residents' perceived livelihood conditions [57] to provide a more comprehensive understanding of the relationship between rural spatial restructuring and livelihood sustainability.

Supplementary Materials: The following supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/land15112209/s1.

Author Contributions: Conceptualization, X.Z. and J.H.; methodology, X.Z.; software, K.W. and J.H.; validation, X.Z., K.W. and M.N.; formal analysis, K.W. and M.N.; investigation, X.Z., K.W., M.N. and J.H.; resources, M.N.; data curation, X.Z. and K.W.; writing—original draft preparation, S.S. and X.Z.; writing—review and editing, S.S., K.W., M.N. and J.H.; visualization, J.H.; supervision, S.S. and Y.G.; project administration, Y.G.; funding acquisition, Y.G. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by National Key R&D Program of China (Grant No. 2022YFC3802801).

Institutional Review Board Statement: This study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki. Informed consent was obtained from all participants involved in this study. Specifically, written informed consent was obtained from all questionnaire respondents prior to their participation, and verbal informed consent was obtained from all interviewees. All participants were explicitly informed that the data collected would be used solely for academic research purposes, that their personal information would be kept strictly confidential, and that no individually identifiable information would be disclosed in this manuscript. As this study does not involve sensitive personal data or clinical trials, it has received formal ethical approval from our Institutional Review Board.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The datasets presented in this article are not readily available because the data are part of an ongoing study. Requests to access the datasets should be directed to the corresponding author.

Acknowledgments: Thanks to Zhang Feng for his guidance and support in the field investigation and analysis process. Thanks to the reviewers for providing valuable suggestions for this paper.

Conflicts of Interest: The authors declare no conflicts of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

References

1. Gao, C.; Cheng, L. Tourism-driven rural spatial restructuring in the metropolitan fringe: An empirical observation. *Land Use Policy* **2020**, *95*, 104609. [CrossRef]
2. Bi, G.; Yang, Q. The spatial production of rural settlements as rural homestays in the context of rural revitalization: Evidence from a rural tourism experiment in a Chinese village. *Land Use Policy* **2023**, *128*, 106600. [CrossRef]
3. Su, M.M.; Wall, G.; Wang, Y.; Jin, M. Livelihood sustainability in a rural tourism destination—Hetu Town, Anhui Province, China. *Tour. Manag.* **2019**, *71*, 272–281. [CrossRef]
4. Luo, X.; Bao, J. Exploring the impacts of tourism on the livelihoods of local poor: The role of local government and major investors. *J. Sustain. Tour.* **2019**, *27*, 344–359. [CrossRef]
5. Zhou, T.; Harris, R.; Manley, D. The Association of Internal Migration and Intergenerational Educational Mobility with Mental and Cognitive Well-Being in Later Life: Evidence from China. *Popul. Space Place* **2025**, *31*, e70137. [CrossRef]
6. Chan, K.W. Introduction: Fragmented mobilities, stratified belonging—Rethinking internal migration in China. *Eurasian Geogr. Econ.* **2025**, *66*, 435–441. [CrossRef]
7. Cheng, H. Does home still call? Generational differences in Chinese return migration. *Popul. Space Place* **2025**, *31*, e70009. [CrossRef]
8. Lee, E.S. A theory of migration. *Demography* **1966**, *3*, 47–57. [CrossRef]
9. Zhou, Q.; Huang, Z.; Zeng, L.; Xu, J. Why do Chinese migrant workers return? Exploring economic push-pull factors and emotional ties. *PLoS ONE* **2025**, *20*, e0325848. [CrossRef] [PubMed]
10. Cheng, M.; An, M.; Tan, H. After returning to the rural: The (un) sustainable reintegration of internal migrant workers in China. *Popul. Space Place* **2025**, *31*, e2885. [CrossRef]
11. Bebbington, A. Capitals and capabilities: A framework for analyzing peasant viability, rural livelihoods and poverty. *World Dev.* **1999**, *27*, 2021–2044. [CrossRef]
12. Capital, W.I.S. Social capital: Implications for development theory, research, and policy. *World Bank Res. Obs.* **2000**, *15*, 225–249. [CrossRef]
13. Guo, H.; Jordan, E.J. Social exclusion and conflict in a rural tourism community: A case study from Likeng Village, China. *Tour. Stud.* **2022**, *22*, 42–60. [CrossRef]

14. Massey, D.S.; Arango, J.; Hugo, G.; Kouaouci, A.; Pellegrino, A.; Taylor, J.E. Theories of international migration: A review and appraisal. *Popul. Dev. Rev.* **1993**, *19*, 431–466. [CrossRef]
15. De Haas, H. Migration and development: A theoretical perspective. *Int. Migr. Rev.* **2010**, *44*, 227–264. [CrossRef] [PubMed]
16. Zhao, Y. Causes and consequences of return migration: Recent evidence from China. *J. Comp. Econ.* **2002**, *30*, 376–394. [CrossRef]
17. Kumar, A.; Kumar, A.; Kumari, S.; Kumari, N.; Kumari, S.; Mishra, P. Sustainable Livelihoods a Foundation for Rural Development Leads to Sustainability. *Problemy Ekorozwoju* **2023**, *18*, 128–140. [CrossRef]
18. Soja, E.W. Thirdspace: Journeys to Los Angeles and other real-and-imagined places. *Cap. Cl.* **1998**, *22*, 137–139. [CrossRef]
19. Lefebvre, H. *The Production of Space*; Nicholson-Smith, D., Translator; Blackwell: Oxford, UK, 1991.
20. Atkinson, A.B. Social exclusion, poverty and unemployment. In *Exclusion, Employment and Opportunity*; Atkinson, A.B., Hills, J., Eds.; Centre for Analysis of Social Exclusion: London, UK, 1998; Volume CASEpaper 4, pp. 1–20.
21. Lenoir, R. *Les Exclus: Un Français sur Dix*; Seuil: Paris, France, 1974.
22. De Haan, A.; Maxwell, S. Poverty and social exclusion in North and South. *Inst. Dev. Stud. Partn. Organ.* **2017**, *48*, 1A. [CrossRef]
23. Scoones, I. *Sustainable Rural Livelihoods: A Framework for Analysis*; IDS Working Paper 72; Institute of Development Studies: Brighton, UK, 1998.
24. Chambers, R.; Conway, G. *Sustainable Rural Livelihoods: Practical Concepts for the 21st Century*; IDS Discussion Paper 296; Institute of Development Studies: Brighton, UK, 1992.
25. Natarajan, N.; Newsham, A.; Rigg, J.; Suhardiman, D. A sustainable livelihoods framework for the 21st century. *World Dev.* **2022**, *155*, 105898. [CrossRef]
26. Silver, H. Social exclusion and social solidarity: Three paradigms. *Int. Lab. Rev.* **1994**, *133*, 531.
27. Bourdieu, P. *Forms of Capital*; Wiley-Blackwell: Oxford, UK, 2011.
28. Bourdieu, P. The forms of social capital. In *Handbook of Theory and Research for the Sociology of Education*; Greenwood: Westport, CT, USA, 1986; pp. 241–258.
29. Hayes, A.F. *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*; Guilford Press: New York, NY, USA, 2013.
30. Taylor, A.B.; MacKinnon, D.P.; Tein, J.-Y. Tests of the three-path mediated effect. *Organ. Res. Methods* **2008**, *11*, 241–269. [CrossRef]
31. Creswell, J.W.; Plano Clark, V.L. *Designing and Conducting Mixed Methods Research*; Sage Publications: Thousand Oaks, CA, USA, 2007.
32. Venkatesh, V.; Brown, S.A.; Sullivan, Y.W. Guidelines for conducting mixed-methods research: An extension and illustration. *J. Assoc. Inf. Syst.* **2016**, *17*, 2. [CrossRef]
33. Podsakoff, P.M.; MacKenzie, S.B.; Lee, J.-Y.; Podsakoff, N.P. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *J. Appl. Psychol.* **2003**, *88*, 879. [CrossRef] [PubMed]
34. Kock, N. Common method bias in PLS-SEM: A full collinearity assessment approach. *Int. J. e-Collab.* **2015**, *11*, 1–10.
35. Hair, J.F.; Risher, J.J.; Sarstedt, M.; Ringle, C.M. When to use and how to report the results of PLS-SEM. *Eur. Bus. Rev.* **2019**, *31*, 2–24. [CrossRef]
36. Hair, J.F.; Sarstedt, M.; Ringle, C.M.; Mena, J.A. An assessment of the use of partial least squares structural equation modeling in marketing research. *J. Acad. Mark. Sci.* **2012**, *40*, 414–433. [CrossRef]
37. Reinartz, W.; Haenlein, M.; Henseler, J. An empirical comparison of the efficacy of covariance-based and variance-based SEM. *Int. J. Res. Mark.* **2009**, *26*, 332–344. [CrossRef]
38. Dijkstra, T.K.; Henseler, J. Consistent partial least squares path modeling1. *MIS Q.* **2015**, *39*, 297–316. [CrossRef]
39. Fornell, C.; Larcker, D.F. Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* **1981**, *18*, 39–50. [CrossRef]
40. Hensler, J.; Dijkstra, T.K.; Sarstedt, M.; Ringle, C.M.; Diamantopoulos, A.; Straub, D.W.; Ketchen, D.; Hair, J.; Hult, G.; Calantone, R. Common beliefs and reality about PLS. *Organ. Res. Methods* **2014**, *17*, 182–209. [CrossRef]
41. Preacher, K.J.; Hayes, A.F. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behav. Res. Methods* **2008**, *40*, 879–891. [CrossRef] [PubMed]
42. Braun, V.; Clarke, V. Using thematic analysis in psychology. *Qual. Res. Psychol.* **2006**, *3*, 77–101. [CrossRef]
43. Nowell, L.S.; Norris, J.M.; White, D.E.; Moules, N.J. Thematic analysis: Striving to meet the trustworthiness criteria. *Int. J. Qual. Methods* **2017**, *16*, 1609406917733847.
44. Flick, U. 4.6 triangulation in qualitative research. *A Companion Qual. Res.* **2004**, *1*, 178.
45. Saaty, T.L. *The Analytic Hierarchy Process*; McGraw-Hill: New York, NY, USA, 1980.
46. Saaty, T.L. How to make a decision: The analytic hierarchy process. *Eur. J. Oper. Res.* **1990**, *48*, 9–26. [CrossRef]
47. Denzin, N.K. *The Research Act: A Theoretical Introduction to Sociological Methods*, 2nd ed.; McGraw-Hill: New York, NY, USA, 1978.
48. Wilson, G.A. From productivism to post-productivism ... and back again? Exploring the (un)changed natural and mental landscapes of European agriculture. *Trans. Inst. Br. Geogr.* **2001**, *26*, 77–102. [CrossRef]

49. Holmes, J. Impulses towards a multifunctional transition in rural Australia: Gaps in the research agenda. *J. Rural Stud.* **2006**, *22*, 142–160. [CrossRef]
50. Lorenzen, M. Rural gentrification, touristification, and displacement: Analysing evidence from Mexico. *J. Rural Stud.* **2021**, *86*, 62–75. [CrossRef]
51. Gotham, K.F. Tourism gentrification: The case of new Orleans' vieux carre (French Quarter). *Urban Stud.* **2005**, *42*, 1099–1121. [CrossRef]
52. Soja, E.W. *Seeking Spatial Justice*; University of Minnesota Press: Minneapolis, MN, USA, 2010.
53. Phillips, M. Other geographies of gentrification. *Prog. Hum. Geogr.* **2004**, *28*, 5–30. [CrossRef]
54. Ahmed, N.; Lou, W.; Ahmed, J.; Akbar, A. Toward resilient cities: Mapping the interconnected factors shaping urbanization in a dual analysis framework. *PLoS ONE* **2025**, *20*, e0317342. [CrossRef] [PubMed]
55. Perry, J.A. The Negotiation of New Family Formation Post-migration among Low-wage Migrant Workers: The Case of Canada. *Int. Migr.* **2021**, *59*, 41–56. [CrossRef]
56. Wang, Y.; Zhang, L.; Zhang, S.; Zhu, S.; Zhang, F.; Zhang, G.; Duan, B.; Ren, R.; Zhang, H.; Han, M.; et al. Regulating pathway for bacterial diversities toward improved ecological benefits of thiencarbazone-methyl·isoxaflutole application: A field experiment. *J. Environ. Manag.* **2024**, *352*, 120037. [CrossRef] [PubMed]
57. Zhang, Z.; Huo, L.; Su, Y.; Shen, H.; Yang, G. Estimation of Corn Net Primary Productivity and Carbon Sequestration Based on the CASA Model: A Case Study of the Fen River Basin. *Sustainability* **2024**, *16*, 2942. [CrossRef]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.