

UDC (YŹK) 332.14:338.48

Zarina Baxtiyorovna Axrorova

*Researcher (PhD), Department of Economy,
Bukhara State University, Bukhara, Uzbekistan*

SPECIALISE OR DIVERSIFY? A RELATED-VARIETY RESOLUTION OF THE REGIONAL DEVELOPMENT DILEMMA IN TOURISM- DEPENDENT SERVICE ECONOMIES

Abstract. Regional policy issues two instructions that appear to contradict one another. Smart specialisation directs regions to concentrate scarce resources on domains of existing comparative advantage; resilience thinking directs them to diversify so that a shock to any single activity does not propagate to the whole economy. The related-variety literature has offered a reconciliation — diversify, but into activities cognitively proximate to what the region already does — yet that reconciliation has recently been subjected to a substantial critique questioning whether relatedness measures capture the mechanism they are held to capture. This article argues that the dilemma is sharpest, and the existing reconciliation weakest, in tourism-dependent service economies, and that these cases require a framework the literature does not currently provide. Tourism simultaneously intensifies both poles: it generates strong agglomeration and reputational returns to concentration while exposing the regional economy to demand shocks that are exogenous, correlated across all tourism-linked activities, and unrelated to local productive capability. Following a theory-adaptation design, the article separates capability relatedness from demand correlation and distinguishes three diversification paths available to such regions — deepening within the tourism value chain, branching into related non-tourism services, and leapfrogging into unrelated activity — specifying the conditions under which each dominates. Nine propositions link asset specificity, demand correlation, institutional thickness and the seasonality profile to the appropriate path, and identify a diversification trap in which apparent diversification raises measured variety while leaving the underlying demand exposure unchanged. The framework is illustrated with published statistics on the Bukhara region of Uzbekistan, whose 2020 demand collapse displays the exposure structure the framework describes.

Keywords: regional specialisation; service diversification; related variety; smart specialisation; tourism dependence; regional resilience; economic geography; Bukhara region

**Ixtisoslashuvmi yoki diversifikatsiyami? Turizmga bogʻliq xizmat koʻrsatish
iqtisodiyotlarida hududiy rivojlanish dilemmasining bogʻliq xilma-xillik asosidagi yechimi**

*Zarina Baxtiyorovna Axrorova — tadqiqotchi (PhD), Iqtisodiyot kafedrasi, Buxoro davlat
universiteti, Buxoro, Oʻzbekiston*

Annotatsiya. Hududiy siyosat bir-biriga zid koʻringan ikki koʻrsatma beradi. Aqlli ixtisoslashuv hududlarni cheklangan resurslarni mavjud qiyosiy ustunlik sohalariga jamlashga yoʻnaltiradi; barqarorlik (resilience) yondashuvi esa har qanday alohida faoliyatga tushgan zarba butun iqtisodiyotga tarqalmasligi uchun diversifikatsiyani tavsiya etadi. Bogʻliq xilma-xillik (related variety) adabiyoti murosani taklif qilgan edi — diversifikatsiya qiling, lekin hudud allaqachon bajarayotgan faoliyatga kognitiv jihatdan yaqin sohalariga. Biroq soʻnggi yillarda ushbu murosalar jiddiy tanqidga uchradi: bogʻliqlik oʻlchovlari oʻzlariga nisbat berilayotgan mexanizmni haqiqatan ham qamrab oladimi, degan savol qoʻyildi. Maqolada dilemma turizmga bogʻliq xizmat koʻrsatish iqtisodiyotlarida eng keskin, mavjud murosalar esa eng zaif ekanligi hamda bunday holatlar adabiyotda hozircha mavjud boʻlmagan alohida konseptual ramkani talab qilishi asoslanadi. Turizm ikkala qutbni bir vaqtda kuchaytiradi: u jamlanishdan kuchli aglomeratsiya va obroʻ (reputatsion) daromadlarini yaratadi, ayni paytda hududiy iqtisodiyotni ekzogen, turizm bilan bogʻliq barcha faoliyatlar boʻylab korrelyatsiyalangan va mahalliy ishlab chiqarish qobiliyatiga bogʻliq boʻlmagan talab zarbalariga ochib qoʻyadi. Nazariyani moslashtirish (theory adaptation) dizayni asosida maqolada qobiliyat boʻyicha bogʻliqlik talab korrelyatsiyasidan farqlanadi va

bunday hududlar uchun uchta diversifikatsiya yo'li — turizm qiymat zanjiri ichida chuqurlashish, turizmga aloqador bo'lmagan bog'liq xizmatlarga tarmoqlanish va bog'liq bo'lmagan faoliyatga sakrash — ajratilib, ularning har biri qaysi shartlarda ustun bo'lishi ko'rsatiladi. To'qqizta taklif aktivlarning o'ziga xosligi, talab korrelyatsiyasi, institutsional zichlik va mavsumiylik profilini tegishli yo'l bilan bog'laydi hamda diversifikatsiya tuzog'ini aniqlaydi: bunda tashqi ko'rinishdagi diversifikatsiya o'lchanadigan xilma-xillikni oshiradi, ammo talabga nisbatan asosiy tavakkalchilikni o'zgarishsiz qoldiradi. Ramka O'zbekistonning Buxoro viloyati bo'yicha e'lon qilingan statistik ma'lumotlar asosida illyustratsiya qilinadi.

Kalit so'zlar: hududiy ixtisoslashuv; xizmatlar diversifikatsiyasi; bog'liq xilma-xillik; aqlli ixtisoslashuv; turizmga bog'liqlik; hududiy barqarorlik; iqtisodiy geografiya; Buxoro viloyati

Специализация или диверсификация? Решение дилеммы регионального развития в туристически зависимых сервисных экономиках на основе концепции связанного разнообразия

Зарина Бахтияровна Ахорова — исследователь (PhD), кафедра экономики, Бухарский государственный университет, Бухара, Узбекистан

Аннотация. Региональная политика даёт два указания, которые кажутся противоречащими друг другу. Умная специализация предписывает регионам концентрировать ограниченные ресурсы в областях существующего сравнительного преимущества; концепция устойчивости (resilience) предписывает диверсифицироваться, чтобы шок в отдельном виде деятельности не распространялся на экономику в целом. Литература о связанном разнообразии (related variety) предложила примирение — диверсифицироваться, но в направлении видов деятельности, когнитивно близких к тому, что регион уже делает. Однако в последнее время это примирение подверглось серьёзной критике, ставящей под сомнение, действительно ли показатели связанности отражают тот механизм, который им приписывается. В статье обосновывается, что дилемма наиболее остра, а существующее примирение наиболее слабо в туристически зависимых сервисных экономиках, и что такие случаи требуют концептуальной рамки, которой литература пока не располагает. Туризм одновременно усиливает оба полюса: он порождает сильные агломерационные и репутационные выгоды от концентрации и одновременно подвергает региональную экономику шокам спроса, которые являются экзогенными, коррелированными по всем связанным с туризмом видам деятельности и не связанными с местным производственным потенциалом. Опираясь на дизайн адаптации теории, статья разграничивает связанность по компетенциям и корреляцию спроса и выделяет три пути диверсификации — углубление внутри туристической цепочки создания стоимости, ветвление в связанные нетуристические услуги и перескок в несвязанные виды деятельности, — определяя условия доминирования каждого из них. Девять положений связывают специфичность активов, корреляцию спроса, институциональную плотность и профиль сезонности с соответствующим путём и выявляют ловушку диверсификации, при которой видимая диверсификация повышает измеряемое разнообразие, оставляя базовую подверженность спросу неизменной. Рамка иллюстрируется опубликованными статистическими данными по Бухарской области Узбекистана.

Ключевые слова: региональная специализация; диверсификация услуг; связанное разнообразие; умная специализация; зависимость от туризма; региональная устойчивость; экономическая география; Бухарская область

JEL classification: R11; R58; L83; O18

1. Introduction

Two well-established bodies of regional economic thought give opposing advice. The first, running from Marshall (1890) through Porter's cluster analysis (Porter, 2000) to the smart specialisation agenda now embedded in European and increasingly in non-European regional policy (Foray, 2015), holds that regions prosper by concentrating on domains where they possess distinctive capability, because localisation economies, thick labour markets and specialised suppliers generate increasing returns. The second, running from Jacobs (1969) through the

empirical work of Glaeser, Kallal, Scheinkman and Shleifer (1992) to contemporary resilience scholarship (Martin & Sunley, 2015), holds that diversity protects: economies with a broad activity base absorb sector-specific shocks and recombine knowledge across domains.

The related-variety literature proposed a resolution. Frenken, Van Oort and Verburg (2007) distinguished related from unrelated variety and showed that the two carry different implications — related variety supports employment growth through knowledge spillovers, unrelated variety buffers unemployment shocks through portfolio effects. Subsequent work on regional branching demonstrated that regions diversify into activities technologically proximate to their existing base (Neffke, Henning & Boschma, 2011), and the concept became a foundation for smart specialisation practice (Content & Frenken, 2016). The reconciliation is elegant: specialise and diversify simultaneously, by diversifying into the related space.

Two developments unsettle this settlement. Bathelt and Storper (2023) argue that relatedness measures conflate several distinct mechanisms and that the evidence linking them to regional development is weaker than the literature's confidence suggests. And the empirical setting to which the framework is increasingly applied has shifted: much of it now consists of service-led regional economies, whereas the framework was developed on manufacturing data where technological relatedness is comparatively well proxied by product and patent classifications.

Tourism-dependent service regions are the limiting case of this shift, and they expose the framework's incompleteness with unusual clarity. Such regions — of which historic-city economies with substantial heritage endowments are the archetype — possess a genuine specialisation with real agglomeration returns, and simultaneously face precisely the risk structure that motivates diversification: demand originating outside the region, arriving through a small number of channels, and correlated across every locally provided service that serves visitors. Advising such a region to diversify into the related space is close to vacuous, because almost everything related to tourism is also exposed to tourism demand. The relatedness that generates spillovers is the same relatedness that transmits the shock.

This article develops the framework the case requires. Its contribution is threefold. It distinguishes two dimensions that the related-variety literature conflates — capability relatedness and demand correlation — and shows that in tourism-dependent service economies they diverge, whereas in the manufacturing settings where the framework was built they broadly coincide. On that basis it specifies three diversification paths and the conditions selecting among them. And it identifies the diversification trap: a configuration in which conventional diversification indices record rising variety while the region's exposure to a single demand source is unchanged or increasing. The argument is developed as a theory-adaptation article in the sense of MacInnis (2011) and Jaakkola (2020), importing a distinction from portfolio reasoning into evolutionary economic geography; the design is set out in Section 2.

The remainder of the article proceeds as follows. Section 2 states the research design, the criteria governing source selection and the logic by which the propositions are derived. Section 3 reviews the specialisation and diversification arguments and the related-variety reconciliation together with its recent critique. Section 4 establishes the analytical claim that capability relatedness and demand correlation diverge in tourism-dependent regions. Section 5 sets out the three paths, the nine propositions and the diversification trap. Section 6 illustrates the framework with published statistics on the Bukhara region of Uzbekistan. Sections 7 and 8 discuss implications for theory, policy and measurement, Section 9 states the limitations and the research agenda, and Section 10 concludes.

2. Methodology

2.1. Research design

The article is conceptual rather than empirical, and follows the theory-adaptation design identified by MacInnis (2011) and formalised for conceptual work by Jaakkola (2020). A theory-adaptation article takes an established framework, identifies a bounded domain in which one of the framework's implicit assumptions fails, imports a construct from an adjacent literature to repair the resulting gap, and derives testable propositions from the repaired framework. The four

elements are, in this case, as follows. The established framework is the related-variety account of regional diversification (Frenken et al., 2007; Neffke et al., 2011; Content & Frenken, 2016). The implicit assumption is that activities sharing capabilities also share markets, so that a single relatedness index can serve both the spillover argument and the buffering argument. The domain in which the assumption fails is the tourism-dependent service economy, for the reasons set out in Section 4. The imported construct is the separation of covariance from capability that underlies portfolio reasoning and its regional application (Siegel, Johnson & Alwang, 1995; Malizia & Ke, 1993). The output is a two-dimensional screening framework, summarised in Table 1, and nine propositions.

The design is explanatory rather than predictive in Jaakkola's (2020) sense: the objective is to specify why an established prescription fails in a defined class of cases and what replaces it, not to estimate the size of any effect. Accordingly the article makes no causal claim that is tested here, and each proposition is formulated so that it could in principle be falsified; Table 4 sets out designs for those propositions for which the required data are realistically obtainable.

2.2. Source selection

The literature was assembled purposively rather than systematically, as is appropriate to conceptual work (Jaakkola, 2020). Three inclusion criteria governed selection. The first is foundational status: works that establish the specialisation argument (Marshall, 1890; Krugman, 1991; Porter, 2000; Foray, 2015), the diversification argument in both its Jacobsian and its insurance-theoretic form (Jacobs, 1969; Glaeser et al., 1992; Malizia & Ke, 1993; Siegel et al., 1995; Wagner & Deller, 1998), and the related-variety reconciliation together with its proximity foundations (Boschma, 2005; Frenken et al., 2007; Boschma & Iammarino, 2009; Neffke et al., 2011). The second is critical currency: recent work contesting the framework, principally Bathelt and Storper (2023), whose second objection the article develops. The third is domain relevance: tourism-economics and regional-studies work establishing the empirical characteristics of tourism-dependent regions, including evidence from Central Asia and the wider post-Soviet space (Brida, Cortés-Jiménez & Pulina, 2016; Aliyeva et al., 2019; Ibragimov, Perles-Ribes & Ramón-Rodríguez, 2022; Astanakulov & Goyipnazarov, 2023; Arabov et al., 2024; Demidova, Tyurina & Buzdalina, 2025; Karimov et al., 2025). Searches were run in Scopus, Web of Science and Google Scholar on combinations of the terms “related variety”, “smart specialisation”, “regional resilience”, “tourism dependence” and “regional diversification”, and were confined to peer-reviewed outlets; sources appearing only in outlets without verifiable peer review were excluded.

The illustrative material in Section 6 is drawn from a deliberately narrow set of sources: the published bulletins of the National Statistics Committee of the Republic of Uzbekistan and of its Bukhara regional department, and peer-reviewed articles reporting regional visitor series. Figures circulating in the press are used only where the report attributes them explicitly to a named official body, and are identified as such at the point of use; every percentage change computed by the author from two published levels is likewise identified.

2.3. Logic of proposition development

Each proposition is derived analytically rather than inductively, in three steps. First, the two dimensions of Table 1 — capability relatedness and demand correlation — are treated as separate variables rather than as a single index, which is the framework's departure from the received literature. Second, each diversification path is located in the resulting space, and its expected effect on the two outcomes the literature attributes to diversification — knowledge recombination and shock absorption — is read off the path's position on each dimension separately. Third, the conditioning variables that the received literature already treats as relevant to regional diversification outcomes — asset specificity, institutional thickness, policy horizon and the seasonality profile — are introduced as moderators, and the resulting conditional claim is stated as a proposition. Propositions 1 to 7 concern path selection; Propositions 8 and 9 concern measurement, and follow from the same separation applied to diversification indices rather than to activities.

Each proposition is stated as a falsifiable conditional claim with an identifiable dependent variable, and Table 4 pairs the principal propositions with a research design and a data requirement. No proposition is tested in this article. The application in Section 6 is illustrative: it establishes that the exposure structure the framework presupposes is observable in at least one archetypal case, which is a necessary but not a sufficient condition for the framework's validity, and it does not constitute a test.

3. Theoretical background

3.1. The case for specialisation

Localisation economies arise where firms in the same activity co-locate: labour pooling, specialised intermediate suppliers and knowledge spillovers reduce costs and raise productivity (Marshall, 1890). Krugman (1991) formalised the cumulative logic by which such advantages become self-reinforcing, and Porter (2000) translated it into cluster policy. Smart specialisation added a discovery mechanism: rather than selecting sectors administratively, regions should identify through entrepreneurial experimentation the domains in which they possess latent advantage, and concentrate public resources there (Foray, David & Hall, 2009; Foray, 2015).

For service economies the argument holds with an amendment. Because most services are non-tradable and consumed where produced, the relevant agglomeration mechanism is less supplier specialisation than reputational and infrastructural: a destination with recognised standing attracts demand that supports a density of complementary providers, which raises the quality of the composite experience, which reinforces standing. The externality is real, and it is specific to concentration.

3.2. The case for diversification

Jacobs (1969) argued that novelty arises from recombination across activities rather than deepening within one, and Glaeser et al. (1992) found urban growth associated with diversity rather than specialisation. A second, distinct argument is insurance-theoretic: an economy whose activities are imperfectly correlated experiences lower aggregate volatility, a logic developed in regional economics by Siegel, Johnson and Alwang (1995) and connected to unemployment stability by Malizia and Ke (1993) and Wagner and Deller (1998). Resilience scholarship subsequently distinguished resistance, recovery and re-orientation as separable capacities (Simmie & Martin, 2010; Martin & Sunley, 2015), and lock-in research showed that strong specialisation can become a liability when the specialised domain declines (Grabher, 1993; Martin & Sunley, 2006). Recent evidence from the post-Soviet space is consistent with both halves of the argument: Demidova, Tyurina and Buzdalina (2025), analysing eighty-four Russian regions across the 2019–2022 shock episode, find that tourism development accounts for a substantial share of the variation in regional growth while separating regions into tourism-dependent and tourism-complementary types with markedly different volatility profiles.

The two arguments are frequently bundled, but they are not the same. The Jacobs argument concerns knowledge and requires cognitive distance sufficient for recombination but not so great as to prevent it. The insurance argument concerns demand and requires low covariance of shocks. A regional portfolio can satisfy either without the other, and the distinction is central to what follows.

3.3. Related variety and its critique

Frenken et al. (2007) operationalised the distinction using entropy decomposition, measuring related variety as within-branch and unrelated variety as between-branch entropy, and found the predicted differential effects. Boschma (2005) supplied the underlying proximity theory, arguing that spillovers require cognitive proximity but that excessive proximity produces lock-in. Boschma and Iammarino (2009) extended the argument beyond the region's own activity mix to its trade linkages, showing for Italian provinces that growth is associated with imports from sectors related, but not identical, to the existing regional base — evidence that the operative proximity is cognitive rather than merely sectoral, and an early indication that relatedness measured on classifications and relatedness understood as shared capability need not coincide. Neffke et al. (2011) demonstrated that regional industry portfolios evolve along relatedness-defined paths, and

Hidalgo, Klinger, Barabási and Hausmann (2007) established the analogous result for national export baskets.

Bathelt and Storper (2023) raise three objections that bear directly on the present argument: that relatedness indices are constructed from classification systems whose adjacency reflects statistical convention as much as economic mechanism; that the measures cannot distinguish knowledge-based relatedness from input–output or demand-based relatedness; and that the policy inference — steer diversification towards the related space — does not follow from the correlational evidence. The second objection is the one this article develops. Where relatedness is measured by co-occurrence or classification adjacency, activities linked by shared demand are recorded as related even when they share no capability, and the framework's two predictions — spillovers and buffering — then apply to sets of activities that are not the same set.

4. The tourism-dependence complication

4.1. Why tourism intensifies both poles

Tourism specialisation generates unusually strong concentration returns. The product is a composite assembled by the visitor from accommodation, food service, transport, retail, cultural provision and guiding; its quality depends on the density and coordination of providers within a small area; and destination reputation is a public good whose value rises with the number of firms sustaining it. These properties make the case for concentration stronger than in most service activities. The tourism-led growth literature documents the resulting expansion effects across a wide range of settings (Brida, Cortés-Jiménez & Pulina, 2016), and the effect is measurable in the Uzbek case: Astanakulov and Goyipnazarov (2023) estimate a positive elasticity of regional output with respect to visitor arrivals while explicitly cautioning against reliance on tourism in the absence of economic diversification.

The same properties generate an adverse risk structure. Demand originates outside the region and is therefore not stabilised by local income. It is transmitted through a small number of channels — air connectivity, tour operators, visa regimes, platform intermediaries — each of which is a single point of failure; gravity estimates for Central Asia find regional tourism demand to be strongly distance-elastic and sensitive to conditions in a small set of origin markets (Ibragimov, Perles-Ribes & Ramón-Rodríguez, 2022). It is highly seasonal, so capacity is idle for part of the year regardless of shocks. And it is correlated across every activity serving visitors: a collapse in arrivals reduces hotel, restaurant, transport, retail and guiding revenue simultaneously and by similar proportions.

4.2. Capability relatedness and demand correlation diverge

The article's central analytical claim can now be stated. In manufacturing regions, activities that are capability-related are typically also demand-correlated, because they sit in the same value chain and serve overlapping final markets; the two dimensions move together, and a single relatedness index can proxy both. In tourism-dependent service regions they come apart in a specific and consequential way: the set of activities sharing capabilities with tourism is almost coextensive with the set exposed to tourism demand, while activities with uncorrelated demand — business services, logistics, health provision for the resident population, agro-processing — are precisely those most cognitively distant from the tourism base.

The result is that the standard prescription becomes self-defeating. Diversification into the related space adds activities whose shocks are perfectly correlated with the existing base, raising measured variety without reducing exposure. Diversification that genuinely reduces exposure must move into the unrelated space, where the region has no capability advantage and the branching literature predicts low probability of success.

Table 1. Two dimensions of regional portfolio structure

Quadrant	Capability relatedness to the tourism base	Correlation of demand shocks with tourism	Strategic reading
I. Deepening	High — shares skills, assets and reputation with the existing base	High — same visitor demand	Raises productivity and value capture; does not reduce exposure
II. Branching	Moderate — shares generic service capability, partially transferable	Moderate — partly resident or business demand	The efficient frontier for most regions
III. Leapfrogging	Low — requires capability the region does not hold	Low — independent demand source	Reduces exposure at high failure risk
IV. Trap	Low — serves visitors without deploying or building any distinctive transferable capability	High — still serves visitor demand	Adds measured variety and fixed costs while leaving exposure intact; to be avoided

Two clarifications of Table 1 are required, because the quadrants are defined on dimensions that are conventionally merged. Capability relatedness here means the extent to which an activity draws on, and further develops, a distinctive and at least partially transferable competence that the region already holds. Mere adjacency to the visitor is not capability relatedness: an activity can stand physically and commercially beside the tourism base and still deploy no competence that would survive the loss of visitor demand. Demand correlation means the covariance of the activity's revenue with visitor arrivals, irrespective of what the activity produces. Quadrant IV is therefore not defined by distance from tourism but by the conjunction of capability emptiness and demand exposure. The two dimensions do distinct work in Section 5.4: high demand correlation is what makes a portfolio change spurious for resilience purposes, and is therefore the dimension over which Proposition 8 is stated, while low capability relatedness is what makes quadrant IV wasteful in development terms as well, and is why it is designated a trap rather than merely a misclassification.

5. Framework: three diversification paths

The choice among paths is treated here as conditional rather than universal, and the conditioning variables are specified for each.

5.1. Deepening

Deepening moves the region up the tourism value chain — from accommodation towards experience design, from generic to specialised segments, from low- to high-yield visitors. It exploits existing capability and reputational assets, and it raises value added per visitor, which is a genuine development gain. It does not, however, reduce demand-shock exposure, and by increasing asset specificity it may raise it.

Proposition 1. *Deepening increases regional value added per unit of visitor demand but leaves aggregate demand-shock exposure unchanged; where deepening raises asset specificity, exposure increases.*

Proposition 2. *Deepening dominates the other paths where the region's reputational asset is strong and under-exploited, and where the binding constraint on income is yield per visitor rather than the volatility of visitor numbers.*

5.2. Branching

Branching moves into services that share generic capability with the tourism base — hospitality management, event organisation, logistics, facilities management, food processing, language and vocational education — but whose demand derives at least partly from resident population or business clients. Branching is the path the related-variety literature recommends, and the framework endorses it, but with a qualification the literature does not make: the relevant selection criterion is not relatedness alone but relatedness conditional on demand independence.

Proposition 3. *The resilience contribution of branching is increasing in the share of the target activity's demand originating from non-visitor sources. Where that share is negligible, the activity's contribution to the region's resistance capacity approaches zero irrespective of measured relatedness, although the value added, employment and firm capability it sustains may still contribute to recovery capacity once demand returns.*

Proposition 4. *Activities that are moderately related in capability and weakly correlated in demand constitute the efficient diversification frontier for tourism-dependent regions; identifying this set requires two indices rather than one.*

Certain segments occupy an intermediate position of particular interest. Business-events, medical and educational tourism draw on the same physical and hospitality infrastructure as leisure tourism, and are therefore capability-related, but their demand is generated by institutional rather than discretionary consumer decisions and follows a different seasonal and cyclical profile. They are, in the framework's terms, quadrant-II activities that appear to be quadrant-I activities, and they are consequently undervalued by relatedness-based screening.

The stabilising property is, however, specific to the type of fluctuation, and the qualification matters. Institutional segments are less sensitive than leisure demand to seasonal variation and to short-run movements in household discretionary spending, because organisational budgets are set in advance and executed with a lag. They are not insulated from shocks to mobility itself. The 2020 pandemic suspended business travel, conference activity and international education at least as completely as leisure travel, and there is reason to expect institutional segments to withdraw earlier and to return later than households, since organisational travel decisions are subject to internal risk approval on both sides of the shock. The proposition is therefore bounded to seasonal and cyclical fluctuation and does not extend to global mobility shocks; the limitation is carried through to Section 9.

Proposition 5. *Institutionally driven visitor segments reduce portfolio volatility with respect to seasonal and cyclical fluctuation more than their measured relatedness to leisure tourism would predict, because their demand is generated by organisational planning cycles rather than by household discretionary spending. The proposition does not extend to global mobility shocks, under which institutional segments may contract as sharply as, or more sharply than, leisure demand.*

5.3. Leapfrogging

Leapfrogging enters activities with no capability relationship to the existing base. It is the only path that decisively reduces exposure, and the branching literature correctly predicts a low success rate, since the region lacks the capabilities, suppliers and labour force the new activity requires (Neffke et al., 2011). Its feasibility depends on conditions external to the relatedness calculus: the presence of an institution capable of assembling capability that the market will not assemble, and a time horizon long enough for the investment to mature.

Proposition 6. *The success probability of leapfrogging is increasing in institutional thickness and in the length of the policy horizon, and is largely independent of the region's existing capability portfolio; leapfrogging is therefore a policy-dependent rather than a capability-dependent path.*

The counter-seasonal case requires a further clarification. Where the seasonal amplitude of tourism demand is high, the marginal value of an activity is governed less by its output than by whether it draws on capacity in the months when tourism does not. That property belongs to the demand profile of the target activity, not to the distance the region travels to reach it. Counter-seasonal demand is frequently available within branching range: vocational and higher education,

professional training, conference and association business, public and resident-serving provision, and processing activity tied to the agricultural calendar all peak outside the main visitor season in many destinations, and all draw on generic service or facilities capability that a tourism base already holds. Leapfrogging is required only where the region contains no counter-seasonal demand within its capability reach. Proposition 7 is accordingly stated over the demand profile rather than over the path.

Proposition 7. *Where the seasonal amplitude of tourism demand is high, diversification into activities with counter-seasonal demand yields resilience gains disproportionate to their share of regional employment, because the binding constraint is capacity utilisation in the off-season rather than annual output. The gain attaches to the demand profile and not to the path: it is obtainable through branching wherever counter-seasonal demand is locally generated, and requires leapfrogging only where no such demand exists within the region's capability reach.*

5.4. The diversification trap

Quadrant IV in Table 1 identifies a configuration that conventional indicators cannot detect: activity that serves visitor demand while deploying no distinctive capability the region either holds or acquires. The characteristic instances are the retail of imported and mass-produced souvenir goods, unaccredited and informal guiding, visitor-oriented petty commerce and currency and ticketing intermediation, and undifferentiated budget accommodation added beyond the level the demand supports. Each is recorded by activity classifications as a separate line of business, so entry raises the count and the evenness of the region's activity distribution and every standard diversification index registers an improvement. Exposure to a single demand source is unchanged, the fixed-cost base is larger, and the volatility of net regional income has therefore risen.

The trap must be distinguished from a second and more common error, which originates in quadrant I rather than quadrant IV. Craft manufacture drawing on local skill, specialised heritage interpretation, accredited guiding and high-yield experience design are capability-related and developmentally valuable; they are the substance of deepening, and Proposition 2 recommends them where its conditions hold. The error is to count them as diversification. Because they occupy separate activity classifications, their expansion moves a diversification index in exactly the same direction as entry into quadrant IV, while leaving demand exposure equally unchanged. Quadrant IV misallocates resources; misread quadrant I misallocates only the diagnosis. Both, however, produce identical movement in conventional indices, which is why Proposition 8 is stated over the demand dimension alone: what makes a portfolio change spurious for resilience purposes is high demand correlation, not low capability relatedness.

Proposition 8. *Conventional diversification indices computed on activity shares are non-monotonic in demand-shock exposure for tourism-dependent regions, and can indicate rising diversification while exposure increases.*

Proposition 9. *A diversification measure that is valid for resilience purposes in such regions must weight activities by the independence of their demand sources rather than by their share of employment or output.*

Table 2. Path selection: conditions and expected outcomes

Path	Dominant when	Principal risk	Expected outcome
Deepening	Reputational asset under-exploited; yield per visitor low	Rising asset specificity increases downside in a shock	Higher value added; unchanged or higher exposure
Branching	Non-visitor demand exists locally; generic service capability transferable	Relatedness screening selects demand-correlated activities	Moderate resilience gain at moderate risk
Leapfrogging	Institutional capacity available; long policy horizon; no counter-seasonal demand	Capability gap causes failure	Large resilience gain at high risk

	within capability reach		
Trap (avoid)	Never dominant; arises from index-driven policy targets	Higher fixed costs with unchanged exposure	Measured diversification rises; volatility rises

6. Illustrative application: the Bukhara region

6.1. The region as an instance of the archetype

The framework is stated for historic-city economies with substantial heritage endowments. The Bukhara region of Uzbekistan is a clear instance of that archetype, and this section applies the framework to it illustratively, using published statistics. The purpose is not to test the propositions, which the available data do not permit, but to establish that the exposure structure the framework presupposes is observable, and to indicate what an empirical extension would require.

Three features locate the region in the archetype. First, the tourism base is large relative to the regional service economy: accommodation and food service output in the Bukhara region reached 6,982.7 billion soum in January–August 2025, or 27.1 per cent of the region's market services (Bukhara Regional Statistics Department, 2025). The classification is itself instructive for the argument of Section 8.3, since it aggregates visitor-facing accommodation with catering supplied to the resident population and separates neither demand source from the other. Second, the capacity is substantial and physically specific: in 2024 the region held 250 hotels and similar establishments with 3,980 rooms and 8,423 bed-places, together with 44 tourist firms (National Statistics Committee of the Republic of Uzbekistan [hereafter National Statistics Committee], 2025). Third, the region's international segment — a minority of total arrivals, but the segment that sustains the higher-yield capacity — is predominantly long-haul and discretionary in composition, which distinguishes it from the national aggregate, where arrivals from neighbouring CIS states stating family visits as their purpose predominate: 76.7 per cent of arrivals in 2024, against 14.9 per cent stating leisure and recreation (National Statistics Committee, 2025). The corresponding regional breakdown by purpose of visit is not published, so the inference from the composition of arrivals to the composition of demand is indicative rather than established. The distinction matters for the framework, because the two visitor populations have different demand elasticities and different exposure to the channels identified in Section 4.1.

The region is not, however, monofunctional, and this is what makes it informative rather than merely illustrative. In the first quarter of 2023, services accounted for 41.5 per cent of Bukhara's gross regional product, agriculture, forestry and fishing for 26.8 per cent, industry for 22.7 per cent and construction for 9.0 per cent (National Statistics Committee, 2023). A substantial part of regional output therefore rests on demand that is not visitor-generated — which is precisely the resource whose share in a target activity's revenue Propositions 3 and 4 identify as the criterion for branching.

6.2. Exposure and the 2020 shock

The 2020 mobility shock provides an unusually clean natural observation of the exposure structure, because it was exogenous to the region, transmitted through the channels the framework identifies, and correlated across all visitor-serving activity simultaneously. Table 3 sets the regional against the national series.

Table 3. The 2020 demand shock: Uzbekistan and the Bukhara region

Indicator	2019	2020	Change	Source
Foreign visitor trips to Uzbekistan, thousands	6,748.5	1,504.1	−77.7%	National Statistics Committee (2022)
Total visitors, Bukhara region	3,640,900	249,900	−93.1%	Kilichov & Dávid (2025)

International visitors, Bukhara region	603,100	13,300	−97.8%	Kilichov & Dávid (2025)
Domestic visitors, Bukhara region	3,037,800	236,600	−92.2%	Kilichov & Dávid (2025)

Note: Percentage changes are the author's calculations from the published levels. The national and regional series are not directly comparable in level, since they rest on different counting bases; the comparison here concerns rates of change, not magnitudes.

Two features of Table 3 bear on the argument. The first is amplification: the regional international series falls by roughly twenty percentage points more than the national aggregate. This is what the framework predicts for a region whose demand base is narrow in origin and purpose — the national figure is cushioned by short-haul land-border arrivals whose travel motive is family rather than discretionary leisure, and Bukhara's international arrivals are not. Demand exposure, in other words, is not a function of the tourism share alone but of the composition of the demand behind it, which is the substance of Proposition 9. The comparison should be read with care: the national series counts foreign visitor trips and the regional series counts visitors recorded at destination level, so the two rest on different counting conventions and the gap between the rates cannot be attributed to composition alone. It is nonetheless in the direction the framework predicts, and the competing explanation — that the difference is a definitional artefact — is itself testable by the design in the second row of Table 4.

The second is the near-equivalence in magnitude of the domestic and international declines, at 92.2 and 97.8 per cent respectively. Domestic and international visitor-serving activities sit in different activity classifications and would be recorded as diverse by any conventional index; their shocks in 2020 were nonetheless almost perfectly correlated, because both are visitor demand transmitted through mobility. The region entered the shock with a portfolio that a standard index would have described as containing considerable variety within its service sector, and that variety supplied no resistance capacity at all. This is the configuration Proposition 8 describes.

6.3. Seasonality and the limits of the available data

Proposition 7 turns on seasonal amplitude, and here the case runs into a data constraint that is itself informative. No monthly or full quarterly series of visitor arrivals is published for the Bukhara region, and the national bulletins report arrivals annually and by cumulative period rather than by month. What can be established from published sources is indirect. Room-stock utilisation in the region was reported at the top of the national ranking before the shock, and the responsible authority noted at the time that the published coefficient is an average that rises considerably during festivals and at the peak of the season — an acknowledgement of amplitude without a measurement of it (State Committee for Tourism Development, 2020, in a statement reported by the press). The single intra-year split available in the national statistics for the period indicates the order of amplitude involved: 745,720 of the 1,881,350 foreign visitor trips recorded in 2021, or 39.6 per cent of the year, fell in the fourth quarter alone (National Statistics Committee, 2022; share calculated by the author), although that year's distribution is distorted by the sequencing of reopening. Academic treatment of seasonality in Uzbek tourism identifies climatic conditions as the primary driver but likewise publishes no monthly distribution (Kilichova, Murodullayev & Norkulova, 2023).

The gap is not incidental. The regional statistical apparatus publishes activity counts — establishments, rooms, bed-places, firms, arrivals — in considerable detail, and publishes neither the intra-year distribution that Proposition 7 requires nor the demand-source partition that Proposition 9 requires. The indicators available to regional policy are, in other words, exactly the activity-share indicators that Proposition 8 identifies as non-monotonic in exposure. This is not a peculiarity of one country's statistical practice; it is the general condition that Section 8.3 addresses, and the Bukhara case makes its consequences concrete.

6.4. Reading the region through the framework

Applying the quadrants to the region yields a determinate reading. Deepening candidates are strong: heritage interpretation, craft production drawing on documented local skill, and higher-yield segments are supported by an internationally recognised reputational asset, and Proposition 2 recommends them on income grounds where yield rather than volatility is the binding constraint. They do not reduce exposure, and Table 3 indicates how little protection the existing visitor-serving variety supplied.

Branching candidates are the operative set, consistent with Section 8.2. The region's agricultural, industrial and construction base generates demand that is locally originated and uncorrelated with visitor arrivals, and several activities lie within the capability reach of a mature hospitality economy: facilities and property management, catering and food processing for institutional and industrial clients, logistics, vocational and language education, and professional training and conference provision. The last two are also counter-seasonal in the sense of Proposition 7, since academic and organisational calendars peak outside the principal visitor season. Evidence on the uneven regional distribution of tourism infrastructure readiness in Uzbekistan (Arabov et al., 2024) and on the sustainability constraints facing the Silk Road destinations specifically (Karimov, Okmullaev, Marty & Saidmamatov, 2025) supports treating further undifferentiated capacity expansion as the less attractive alternative.

Leapfrogging is conditioned by Proposition 6 on institutional thickness and policy horizon. National tourism strategy provides a long horizon and identifiable institutional capacity, but it is directed at expanding tourism rather than at assembling capability outside it, which on the framework's reading places the binding constraint on leapfrogging rather than relaxing it.

The trap is a live risk rather than a hypothetical one. Where regional performance is assessed on the number and spread of registered tourism-adjacent businesses, the cheapest way to improve the measure is additional visitor-serving capacity of exactly the kind Section 5.4 describes. A region with 250 accommodation establishments and 8,423 bed-places already possesses the fixed-cost base whose expansion raises volatility; Table 3 shows what happens to revenue against that base when arrivals fall by more than ninety per cent. The framework's recommendation for such a region is to screen candidate activities on demand independence first and capability proximity second, and to treat institutional visitor segments as diversification rather than as tourism expansion — with the bound stated in Proposition 5.

7. Discussion

The framework carries three implications for the related-variety debate. First, it supports Bathelt and Storper's (2023) contention that relatedness measures conflate distinct mechanisms, and specifies one case in which the conflation reverses the policy conclusion. Where capability relatedness and demand correlation coincide, a single index suffices; where they diverge, using one index to serve both the spillover and the buffering argument produces recommendations that satisfy neither.

Second, it clarifies why service-led regions have proved awkward for a framework developed on manufacturing. The difficulty is not primarily that service activities are harder to classify, though they are, but that the classification systems encode output similarity, which in services tracks the customer served rather than the capability deployed. Two activities serving the same visitor are recorded as related; two activities deploying the same capability for different customers are not.

Third, it identifies a policy-evaluation hazard. Regional programmes are frequently assessed on diversification indices. Proposition 8 implies that in tourism-dependent regions such indices can be improved by investments that increase vulnerability, and that a region pursuing the index will be led towards quadrant IV, since additional visitor-serving activity is the cheapest way to raise measured variety.

The framework also has implications for how the specialisation–diversification debate should be posed. The two prescriptions are not alternatives on a single dimension but statements about different dimensions: specialisation is advice about capability, diversification is advice about

exposure. Once separated, the apparent contradiction largely dissolves, and the operative question becomes which activities are simultaneously capability-proximate and demand-independent — an empirical question with a determinate answer for any given region, as the reading of the Bukhara case in Section 6.4 illustrates.

8. Implications

8.1. For regional policy

Three prescriptions follow. Screening for diversification candidates should be two-dimensional, ranking activities by capability proximity and by the correlation of their demand with visitor arrivals, and selecting from the moderate-proximity, low-correlation region rather than maximising proximity. Institutionally driven visitor segments should be treated as diversification rather than as tourism expansion, since Proposition 5 implies their volatility contribution differs from that of leisure demand with respect to seasonal and cyclical variation, though not with respect to global mobility shocks. And where seasonality is the binding constraint, counter-seasonal activity should be evaluated on its contribution to off-season capacity utilisation rather than on its employment share, irrespective of whether it is reached by branching or by leapfrogging.

8.2. For regions in transition and emerging economies

Regions with substantial heritage endowments in emerging economies face this dilemma in an acute form, because tourism is often the only sector in which they possess an internationally recognised advantage, while the institutional capacity that Proposition 6 identifies as the precondition for leapfrogging is limited. The framework implies that for such regions branching is the realistic frontier, and that the policy priority is the identification of locally generated demand — resident services, regional business services, public provision, and demand arising from the region's own agricultural and industrial base — capable of supporting activities that share capability with the tourism base without sharing its demand. The Bukhara reading in Section 6.4 is one worked instance; the same structure would be expected in comparable historic-city economies elsewhere in Central Asia and beyond, and the comparative evidence on tourism's regional impact in the post-Soviet space is consistent with this expectation (Aliyeva et al., 2019; Demidova et al., 2025).

8.3. For measurement practice

Proposition 9 implies a specific revision to indicator design: diversification indices used for resilience assessment should be computed over demand sources rather than over activity classifications. This is more demanding of data but not prohibitively so, since the required partition — visitor, resident, business, public — is coarse and can be approximated from existing survey instruments. Where regional statistical systems already collect arrivals by purpose of visit, as the Uzbek system does at national level, the principal additional requirement is disaggregation to the regional level and to intra-year periods.

9. Limitations and future research

The paper is conceptual and its propositions require testing (Jaakkola, 2020). Four limitations bound the argument. It treats demand correlation as observable, whereas estimating it requires either long sectoral time series or survey-based attribution, both scarce at sub-national level — a constraint the Bukhara material in Section 6.3 illustrates directly. It assumes tourism demand shocks are exogenous to the region, which holds for global shocks but not for reputational damage that is locally caused. It addresses regions with an existing tourism specialisation, not regions considering whether to acquire one. And the stability attributed to institutional visitor segments in Proposition 5 is bounded to seasonal and cyclical fluctuation: the evidence of 2020 indicates that under a shock to mobility itself these segments contract at least as sharply as leisure demand, so the proposition should not be read as a claim about resilience to global disruption.

A fifth constraint applies to Section 6 specifically. The illustration draws on a single region and on published aggregates assembled for other purposes; the regional visitor series originates in a secondary compilation, the national and regional series rest on different counting bases, and no intra-year distribution is available. The section therefore demonstrates the observability of the exposure structure and does not test any proposition.

Table 4. Research agenda

Research question	Suggested design	Data requirement
Do capability relatedness and demand correlation diverge as predicted (Section 4.2)?	Compute both matrices for service activities in tourism-dependent regions and compare their structure.	Sectoral employment series plus demand-source attribution.
Does branching into demand-correlated activities fail to reduce volatility (P3)?	Panel analysis relating regional income volatility to related and unrelated variety, split by demand correlation.	Regional accounts over at least one shock episode.
Do institutional visitor segments stabilise as predicted, and does the effect disappear under mobility shocks (P5)?	Compare seasonal and cyclical amplitude of business-event, medical and educational visitor flows with leisure flows, and repeat the comparison across the 2020 episode.	Disaggregated arrivals data by purpose, monthly where available.
Are counter-seasonal branching and counter-seasonal leapfrogging equivalent in resilience effect (P7)?	Compare off-season capacity utilisation and income volatility in regions that reached counter-seasonal demand by each route.	Monthly regional output or employment series by activity.
Is the trap observable (P8)?	Construct conventional and demand-weighted indices for the same regions and compare their rankings and shock predictions.	Activity shares plus demand partition.
Does institutional thickness condition leapfrogging success (P6)?	Comparative case analysis of regions attempting unrelated diversification.	Programme records and outcome tracking.

10. Conclusion

Regions are told to specialise and to diversify, and the related-variety literature has offered relatedness as the reconciling principle. This article has argued that the reconciliation depends on an empirical coincidence — that activities sharing capabilities also share markets — which holds in the manufacturing settings where the framework was developed and fails in tourism-dependent service economies. Once capability relatedness and demand correlation are separated, the two prescriptions cease to conflict, because they concern different dimensions of the regional portfolio: specialisation is advice about what a region can do well, diversification is advice about what it is exposed to. The practical consequence is that relatedness-based screening, applied without a demand-correlation criterion, will systematically recommend diversification that raises measured variety while leaving exposure intact, and that the indices used to evaluate such policy will confirm its success while the underlying vulnerability grows. The Bukhara material indicates that the exposure structure is observable and that the indicators currently published are not sufficient to detect it, which sets the immediate empirical agenda: build the demand-source partition before building the diversification index.

References

- Aliyeva, S., Chen, X., Yang, D., Samarkhanov, K., Mazbayev, O., Sekenuly, A., Issanova, G., & Kozhokulov, S. (2019). The socioeconomic impact of tourism in East Kazakhstan region: Assessment approach. *Sustainability*, 11(17), Article 4805. <https://doi.org/10.3390/su11174805>
- Arabov, N., Nasimov, D., Janzakov, B., Khomitov, K., Utemuratova, G., Abduraimov, D., & Ismailov, B. (2024). Shaping the future of Uzbekistan's tourism: An in-depth analysis of

- infrastructure influence and strategic planning. *Journal of Eastern European and Central Asian Research*, 11(1), 53–65. <https://doi.org/10.15549/jeecar.v11i1.1478>
- Astanakulov, O., & Goyipnazarov, S. (2023). Tourism as a catalyst for regional development: Uzbekistan's experience and economic prospects. *Economic Annals-XXI*, 204(7–8), 33–44. <https://doi.org/10.21003/ea.V204-05>
- Bathelt, H., & Storper, M. (2023). Related variety and regional development: A critique. *Economic Geography*, 99(5), 441–470. <https://doi.org/10.1080/00130095.2023.2235050>
- Boschma, R. (2005). Proximity and innovation: A critical assessment. *Regional Studies*, 39(1), 61–74. <https://doi.org/10.1080/0034340052000320887>
- Boschma, R., & Iammarino, S. (2009). Related variety, trade linkages, and regional growth in Italy. *Economic Geography*, 85(3), 289–311. <https://doi.org/10.1111/j.1944-8287.2009.01034.x>
- Brida, J. G., Cortés-Jiménez, I., & Pulina, M. (2016). Has the tourism-led growth hypothesis been validated? A literature review. *Current Issues in Tourism*, 19(5), 394–430. <https://doi.org/10.1080/13683500.2013.868414>
- Bukhara Regional Statistics Department. (2025). Buxoro viloyatida xizmatlar sohasining rivojlanishi: 2025 yil yanvar–avgust [Development of the services sector in the Bukhara region, January–August 2025]. Bukhara: Bukhara Regional Statistics Department. https://buxstat.uz/uploads/press-relizlar/2025/xizmat/xizmat_avgust.pdf
- Content, J., & Frenken, K. (2016). Related variety and economic development: A literature review. *European Planning Studies*, 24(12), 2097–2112. <https://doi.org/10.1080/09654313.2016.1246517>
- Demidova, S. E., Tyurina, Y. G., & Buzdalina, O. B. (2025). Assessing the impact of the tourism industry on regional economic growth during periods of systemic restrictions and recovery. *Russian Journal of Regional Studies*, 33(4), 659–677. <https://doi.org/10.15507/2413-1407.129.033.202504.659-677>
- Foray, D. (2015). Smart specialisation: Opportunities and challenges for regional innovation policy. London: Routledge. <https://doi.org/10.4324/9781315773063>
- Foray, D., David, P. A., & Hall, B. H. (2009). Smart specialisation — the concept. *Knowledge Economists Policy Brief No. 9*. Brussels: European Commission.
- Frenken, K., Van Oort, F., & Verburg, T. (2007). Related variety, unrelated variety and regional economic growth. *Regional Studies*, 41(5), 685–697. <https://doi.org/10.1080/00343400601120296>
- Glaeser, E. L., Kallal, H. D., Scheinkman, J. A., & Shleifer, A. (1992). Growth in cities. *Journal of Political Economy*, 100(6), 1126–1152. <https://doi.org/10.1086/261856>
- Grabher, G. (1993). The weakness of strong ties: The lock-in of regional development in the Ruhr area. In G. Grabher (Ed.), *The embedded firm: On the socioeconomics of industrial networks* (pp. 255–277). London: Routledge.
- Hidalgo, C. A., Klinger, B., Barabási, A.-L., & Hausmann, R. (2007). The product space conditions the development of nations. *Science*, 317(5837), 482–487. <https://doi.org/10.1126/science.1144581>
- Ibragimov, K., Perles-Ribes, J. F., & Ramón-Rodríguez, A. B. (2022). The economic determinants of tourism in Central Asia: A gravity model applied approach. *Tourism Economics*, 28(7), 1749–1768. <https://doi.org/10.1177/13548166211009985>
- Jaakkola, E. (2020). Designing conceptual articles: Four approaches. *AMS Review*, 10(1–2), 18–26. <https://doi.org/10.1007/s13162-020-00161-0>
- Jacobs, J. (1969). *The economy of cities*. New York: Random House.
- Karimov, M., Okmullaev, R., Marty, P., & Saidmamatov, O. (2025). Tourism sustainability in Uzbekistan: Challenges and opportunities along the Silk Road. *Economies*, 13(9), Article 250. <https://doi.org/10.3390/economies13090250>
- Kilichov, M., & Dávid, L. D. (2025). Tourism-oriented spatial analysis of tangible cultural heritage in Bukhara (Uzbekistan). *Forum Geografi*, 39(2), 238–261. <https://doi.org/10.23917/forgeo.v39i2.10235>

- Kilichova, O., Murodullayev, B., & Norkulova, D. (2023). Mitigating seasonality in Uzbekistan's tourism sector: Impacts and countermeasures. *Indonesian Journal of Cultural and Community Development*, 14(2). <https://doi.org/10.21070/ijccd.v14i2.895>
- Krugman, P. (1991). Increasing returns and economic geography. *Journal of Political Economy*, 99(3), 483–499. <https://doi.org/10.1086/261763>
- MacInnis, D. J. (2011). A framework for conceptual contributions in marketing. *Journal of Marketing*, 75(4), 136–154. <https://doi.org/10.1509/jmkg.75.4.136>
- Malizia, E. E., & Ke, S. (1993). The influence of economic diversity on unemployment and stability. *Journal of Regional Science*, 33(2), 221–235. <https://doi.org/10.1111/j.1467-9787.1993.tb00222.x>
- Marshall, A. (1890). *Principles of economics*. London: Macmillan.
- Martin, R., & Sunley, P. (2006). Path dependence and regional economic evolution. *Journal of Economic Geography*, 6(4), 395–437. <https://doi.org/10.1093/jeg/lbl012>
- Martin, R., & Sunley, P. (2015). On the notion of regional economic resilience: Conceptualization and explanation. *Journal of Economic Geography*, 15(1), 1–42. <https://doi.org/10.1093/jeg/lbu015>
- National Statistics Committee of the Republic of Uzbekistan. (2022). Tourist flows. In *Socio-economic situation of the Republic of Uzbekistan, January–December 2021*. Tashkent: National Statistics Committee. <https://stat.uz/files/372/murojatlatstatistikasi2021yanvar-dekabren/2366/18Tourist-flows.pdf>
- National Statistics Committee of the Republic of Uzbekistan. (2023). Buxoro viloyatining yalpi hududiy mahsuloti tarkibi [The structure of the gross regional product of the Bukhara region]. Tashkent: National Statistics Committee. <https://stat.uz/uz/matbuot-markazi/qo-mita-yangiliklar/39634-bu1xoro-viloyatining-yalpi-hududiy-mahsuloti-tarkibi-qanday-3>
- National Statistics Committee of the Republic of Uzbekistan. (2025). Development of tourism and recreation in the Republic of Uzbekistan. Tashkent: National Statistics Committee. https://stat.uz/img/news/tourism-and-recreation_p37860.pdf
- Neffke, F., Henning, M., & Boschma, R. (2011). How do regions diversify over time? Industry relatedness and the development of new growth paths in regions. *Economic Geography*, 87(3), 237–265. <https://doi.org/10.1111/j.1944-8287.2011.01121.x>
- Porter, M. E. (2000). Location, competition, and economic development: Local clusters in a global economy. *Economic Development Quarterly*, 14(1), 15–34. <https://doi.org/10.1177/089124240001400105>
- Siegel, P. B., Johnson, T. G., & Alwang, J. (1995). Regional economic diversity and diversification. *Growth and Change*, 26(2), 261–284. <https://doi.org/10.1111/j.1468-2257.1995.tb00171.x>
- Simmie, J., & Martin, R. (2010). The economic resilience of regions: Towards an evolutionary approach. *Cambridge Journal of Regions, Economy and Society*, 3(1), 27–43. <https://doi.org/10.1093/cjres/rsp029>
- State Committee for Tourism Development of the Republic of Uzbekistan. (2020). Utilisation of accommodation capacity by region of Uzbekistan in 2019 [Official statement reported by Kun.uz]. Tashkent. <https://kun.uz/en/90159012>
- Wagner, J. E., & Deller, S. C. (1998). Measuring the effects of economic diversity on growth and stability. *Land Economics*, 74(4), 541–556. <https://doi.org/10.2307/3146884>