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ZAMONAVIY TA'LIMDA ISLOHOTLAR VA TEXNIK TAFAKKUR

ilmiy jurnali

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“ZAMONAVIY TA'LIMDA ISLOHOTLAR VA TEXNIK TAFAKKUR”

ilmiy jurnali

Mazkur ilmiy to'plamda “Zamonaviy ta'limda islohotlar va texnik tafakkur” ilmiy jurnaliga taqdim etilgan ilmiy maqolalar, tezislar hamda ilmiy-tadqiqot natijalari o'rin olgan. Jurnal zamonaviy ta'lim tizimini rivojlantirish, ta'lim jarayoniga innovatsion pedagogik va axborot texnologiyalarini joriy etish, ta'lim mazmuni va metodlarini takomillashtirish, shuningdek, pedagogika, texnika va muhandislik yo'nalishlarining o'zaro integratsiyasini rivojlantirishga qaratilgan ilmiy izlanishlarni yoritishga ixtisoslashgan.

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EXPORT DIVERSIFICATION AND REGIONAL ECONOMIC GROWTH IN UZBEKISTAN

Sh.B. Ashurova ¹

Abstract: This study examines export diversification and regional economic growth in Uzbekistan through a synthesis of published research and a descriptive comparison of official statistics for 2010–2025. Regional export trends vary substantially, but changes in export value do not measure diversification or establish its causal effect on growth. The findings highlight productive learning, domestic supplier linkages and reduced exposure to product-specific shocks as potential mechanisms, emphasizing the need to distinguish export scale, composition and domestic value creation.

Keywords: export diversification; regional economic growth; international trade; structural transformation; Uzbekistan; regional development.

Annotatsiya. Ushbu tadqiqotda chop etilgan ilmiy ishlarni umumlashtirish va 2010–2025-yillarga oid rasmiy statistik ma'lumotlarni tavsifiy taqqoslash orqali O'zbekistonda eksport diversifikatsiyasi va hududiy iqtisodiy o'sish o'rganiladi. Hududlar eksporti dinamikasi sezilarli darajada farqlanadi, biroq eksport qiymatining o'zgarishi diversifikatsiyani o'lchamaydi va uning iqtisodiy o'sishga sababiy ta'sirini tasdiqlamaydi. Natijalar ishlab chiqarish tajribasi orqali bilim va ko'nikmalarni oshirish, mahalliy yetkazib beruvchilar bilan aloqalar hamda alohida mahsulotlarga xos shoklarga ta'sirchanlikni kamaytirishni ehtimoliy mexanizmlar sifatida ko'rsatib, eksport ko'lamini, tarkibi va mamlakat ichida qiymat yaratishni farqlash zarurligini ta'kidlaydi.

Kalit so'zlar: eksport diversifikatsiyasi; hududiy iqtisodiy o'sish; xalqaro savdo; tarkibiy o'zgarishlar; O'zbekiston; hududiy rivojlanish.

Аннотация. В исследовании рассматриваются диверсификация экспорта и региональный экономический рост в Узбекистане посредством обобщения опубликованных исследований и описательного сравнения официальных статистических данных за 2010–2025 годы. Динамика регионального экспорта существенно различается, однако изменения стоимости экспорта не измеряют диверсификацию и не подтверждают её причинное влияние на экономический рост. Результаты выделяют накопление знаний и навыков в процессе производства, связи с отечественными поставщиками и снижение подверженности шокам, специфичным для отдельных товаров, в качестве потенциальных механизмов, подчёркивая необходимость разграничивать масштаб экспорта, его структуру и создание стоимости внутри страны.

Ключевые слова: диверсификация экспорта; региональный экономический рост; международная торговля; структурные преобразования; Узбекистан; региональное развитие.

1. Introduction

International trade links domestic producers with external demand. This connection can support output expansion, but it also transmits changes in international prices and market





conditions. For regional development, the relevant question is not simply whether national exports are increasing. It is whether the composition and territorial distribution of export activity help regions build productive capacity and sustain improvements in living standards. A national export expansion may coexist with substantial differences in regional performance.

Export diversification refers to a broader range of exported products or a more balanced distribution of export earnings across existing products. It differs from export growth: a region can sell more of its dominant product without diversifying, while a smaller exporter can develop a more balanced basket. This distinction is central to the present study, which investigates how export structure may connect external trade with regional development in Uzbekistan.

The macroeconomic and regional dimensions are closely connected. Regions operate under a common national currency and broadly shared monetary and trade policies. Nevertheless, their responses to external shocks can differ because the products they sell, the inputs they purchase and their access to infrastructure are not identical. Exchange-rate movements, for example, may benefit exporters receiving foreign-currency revenues while increasing costs for firms dependent on imported inputs. The net regional outcome depends on these exposures and on domestic supply relationships.

The international evidence motivates, but does not settle, the regional question. Hesse (2008) reports a positive relationship between export diversification and per capita income growth, with differences across development levels. The IMF (2014) discusses diversification as part of structural transformation. Haddad et al. (2010) identify diversification as a condition affecting the association between trade openness and growth volatility. These country-level findings cannot be transferred mechanically to provinces: regional economies exchange labour, capital and intermediate goods within national borders.

For Uzbekistan, the World Bank (2025) identifies infrastructure, competition and integration into international markets as relevant development priorities. These conditions offer a reason to analyse export performance territorially rather than treating national trade as an evenly distributed opportunity. This article interprets them as potential constraints on the transmission of trade opportunities into regional productivity and employment, not as evidence of an already estimated diversification effect.

The research question is therefore: through which mechanisms could export product diversification support regional economic growth in Uzbekistan, and what can currently verified aggregate statistics establish about regional export performance? The analytical expectation is that diversification can support growth where new export activities generate learning and domestic linkages. Its stabilising role should be stronger when additional products are exposed to different





demand and price risks. These are propositions to evaluate, rather than empirical conclusions assumed in advance.

The contribution of this article is to integrate macroeconomic transmission mechanisms, regional productive conditions and trade measurement within one analytical framework. Its empirical component is deliberately descriptive. It calculates changes in selected regional export values and uses them to illustrate the limitations of interpreting export expansion as structural transformation. No regional diversification index or growth regression is reported because a harmonised region-by-product panel has not been established for this analysis.

The article follows the IMRaD structure. Section 2 explains the evidence base, calculations and measurement framework. Section 3 presents the descriptive results and the analytical findings. Section 4 discusses their interpretation, policy implications and limitations. The conclusion identifies the evidence needed to advance from a descriptive assessment to an empirical test of the diversification–growth relationship.

2. Methods

The study combines a focused analytical synthesis with a descriptive comparison of official statistics. The synthesis draws on institutional working papers and assessments selected for their direct relevance to export composition, economic growth, volatility and Uzbekistan's development constraints. It is not a systematic review or meta-analysis: no exhaustive database search, formal screening protocol or pooled effect-size estimation was undertaken. The purpose is to organise plausible mechanisms and identify the requirements for a defensible regional investigation.

The statistical component uses SIAT indicator 1.08.02.0004, which reports annual regional export values in million US dollars. The published series covers 2010–2025. The descriptive table selects Karakalpakstan, Andijan, Bukhara, Tashkent region, Fergana and Khorezm to illustrate different export trajectories. Selection is illustrative rather than representative; these six observations do not constitute a complete regional sample. Tashkent region is a separate territorial unit from Tashkent city, and the two must not be combined inadvertently.

Four benchmark years are used: 2010, 2017, 2020 and 2025. These provide an initial observation, an intermediate reference, a pandemic-year observation and the latest annual observation in the retrieved series. The 2017 benchmark is not treated as an experimental policy intervention. Comparing values before and after a year does not isolate policy effects, and any reform attribution would require an explicit identification strategy and additional evidence.

For each region, the cumulative percentage change between two years is calculated as $C = 100 \times (X_{\text{end}} / X_{\text{start}} - 1)$, where X denotes reported export value. The annualised change over 2017–2025 is calculated as $A = 100 \times [(X_{2025} / X_{2017})^{1/8} - 1]$. The eight-year interval is determined by the





difference between the endpoints. These measures summarise nominal dollar-value changes; they do not measure export quantities, domestic value added or real economic growth.

SIAT indicator 1.01.03.0001 provides gross regional product at current prices in billion soums. Its metadata identifies revisions associated with measurement of the non-observed economy and includes information on unallocated national values. This series is reviewed for data compatibility, not used as a real-growth outcome. Dividing dollar exports directly by soum-denominated output would produce an invalid ratio unless currency units were harmonised; comparing nominal output increases across years would also confound price changes with real production.

All descriptive calculations use the published endpoint values and retain one decimal place for reported export amounts. Calculated percentages are rounded to one decimal place. The article reports no significance tests, regression coefficients or causal estimates. Results distinguish directly observed values, arithmetic summaries and theoretical interpretation so that readers can assess the scope of each claim.

2.1 Measuring diversification and regional growth

A future quantitative extension should construct product shares within each region's goods exports using a consistent classification. Let x_{ikt} denote exports of product k from region i in year t , and let $s_{ikt} = x_{ikt} / \sum_k x_{ikt}$. The Herfindahl–Hirschman concentration index is $HHI_{it} = \sum_k s_{ikt}^2$. With shares expressed as fractions, larger values indicate greater concentration. A convenient diversification measure is $D_{it} = 1 - HHI_{it}$. Its upper bound depends on the number of categories; comparisons therefore require a consistent product universe.

An entropy measure can provide a complementary check: $E_{it} = -\sum_k s_{ikt} \ln(s_{ikt})$, with zero-share terms defined as zero. Entropy increases with the number and balance of positive export categories, while the squared-share index gives greater weight to dominant categories. Neither measure captures technological sophistication or domestic value creation directly. Product counts alone can also overstate meaningful diversification if newly recorded categories account for negligible or temporary sales.

The composition denominator must be consistent. Goods classified by product codes should not be divided by a total that also includes services unless a compatible classification covers both. The same caution applies to national gold exports and exports lacking reliable territorial attribution. These observations should be identified and documented, rather than assigned to regions without evidence. Changes in classification, territorial boundaries or reporting coverage must be checked before constructing a panel.





The preferred growth outcome is the annual change in the logarithm of real gross regional product per capita. It requires regional real output or a defensible chain-volume series and annual population observations. A national consumer price index is not automatically an appropriate regional production deflator. Investment, employment and sectoral output shares may help characterise regional conditions, but their definitions and coverage should be harmonised before they enter a model.

A candidate specification is $g_{it} = \alpha_i + \lambda_t + \beta D_{i,t-1} + \gamma' Z_{i,t-1} + \varepsilon_{it}$. Here g is real per capita output growth, α represents regional fixed effects, λ represents year effects, D measures diversification and Z contains selected controls. This equation is a proposed specification, not an estimated result. Lagging explanatory variables establishes a temporal ordering but does not remove reverse causality or omitted-variable bias. Control selection should follow the mechanism being studied and avoid treating potential mediators automatically as confounders.

Year effects absorb common national conditions, so a single national exchange rate or inflation series cannot be separately identified in that specification. Differential exposure could be examined through an interaction between a national shock and a predetermined regional exposure measure. With a small number of regions, inference also requires attention to few-cluster uncertainty. Alternative concentration measures, influential-region exclusions and sensitivity to the treatment of the pandemic would be useful checks once an actual panel has been assembled.

3. Results

3.1 Regional export trajectories

Table 1 presents verified export values and the author's endpoint calculations. The selected regions display different trajectories across the reference years. The results describe the scale and timing of recorded export performance; they do not identify changes in product composition.

Table 1. Selected regional exports and calculated changes

Region	2010	2017	2020	2025	Change %	Annual %
Karakalpakstan	98.3	462.4	362.7	446.4	-3.5	-0.4
Andijan	638.4	398.7	584.1	1,368.8	243.3	16.7
Bukhara	348.8	201.7	231.1	435.0	115.7	10.1
Tashkent region	1,756.0	1,406.0	1,786.1	2,268.7	61.4	6.2
Fergana	451.8	514.0	556.1	1,112.0	116.3	10.1
Khorezm	156.2	122.7	169.6	470.6	283.5	18.3





Source: National Statistics Committee, SIAT indicator 1.08.02.0004; author's calculations. Export values are million US dollars. Change and annualised change refer to 2017–2025. Regions are illustrative, not a complete national sample.

The calculated expansion was strongest in Khorezm, followed by Andijan, Fergana and Bukhara; Tashkent region remained the largest exporter within this selected group. Karakalpakstan's 2025 value remained below its 2017 level despite exceeding its 2020 observation. The coexistence of different rankings by export level and export change shows why the two dimensions should be assessed separately.

A smaller starting value can produce a large percentage increase. Consequently, rapid percentage growth should not be interpreted as a proportional contribution to national exports or as evidence of higher productivity. Conversely, a large established exporter may add substantial export earnings while recording a lower percentage increase. Export levels, absolute changes and percentage changes answer different questions.

The table cannot determine whether any region added products, reduced dependence on a dominant category or increased export sophistication. It also does not establish that regions with stronger export expansion achieved faster real output growth. Those questions require product shares and comparable real output observations. The descriptive finding is regional heterogeneity in recorded export performance, not a confirmed diversification–growth coefficient.

3.2 Analytical findings on transmission mechanisms

The synthesis identifies productive learning as one plausible connection between diversification and growth. Entry into an additional export activity can require new technical skills, certification and production routines. If these capabilities can be used by other firms, an initial export opportunity may have broader local effects. The mechanism depends on actual knowledge diffusion: a new category in customs statistics does not demonstrate that such diffusion occurred.

A second mechanism is domestic supplier development. An exporting firm may purchase packaging, transport, maintenance or intermediate inputs from nearby businesses. These transactions can spread external demand into regional employment and investment. However, gross exports are not equivalent to the income retained locally. Activities with high imported-input content or weak local procurement may generate limited regional linkages even when export receipts increase substantially.

A third mechanism concerns exposure to external shocks. Dependence on a small number of products can make export earnings sensitive to particular price or demand changes. Adding products may reduce this exposure when their risks differ. Diversification into several products sold to the same market, or dependent on the same transport corridor, may offer less protection.





Product diversification and destination diversification should therefore be treated as related but distinct dimensions.

A fourth mechanism links external demand to investment. Reliable export opportunities can encourage firms to expand capacity and adopt equipment. Financing conditions, electricity supply and logistics influence whether they can respond. The World Bank's assessment of Uzbekistan highlights infrastructure and market constraints, supporting their inclusion as contextual factors rather than confirming a measured regional transmission effect (World Bank, 2025).

These mechanisms connect macroeconomic policy to regional development without assuming a uniform regional response. A currency depreciation can raise local-currency export revenues, but it may also raise imported-input and foreign-currency financing costs. An expansion of external demand can stimulate output where spare capacity exists, while producing delays or cost pressures where infrastructure is constrained. Export composition helps define exposure, but it is only one part of the response.

The analytical result is a conditional framework: diversification is more likely to support regional development when it accompanies durable productive capabilities and domestic linkages. It is more likely to improve resilience when added activities face different risks. Specialisation can nevertheless remain productive where a region has a strong comparative advantage. The relevant development objective is not the largest possible number of export categories, but a sustainable combination of productivity, value creation and manageable exposure.

4. Discussion

The descriptive evidence establishes variation in export trajectories and supports the use of a territorial perspective. It does not establish the central causal proposition that diversification increases regional growth. This distinction matters because export expansion, diversification and output growth can influence one another. A growing regional economy may acquire the infrastructure and skills needed to export additional products; an observed correlation could therefore reflect growth enabling diversification as well as diversification supporting growth.

The framework is consistent with the international literature while remaining narrower in its claims. Hesse (2008) provides cross-country evidence on income growth, and Haddad et al. (2010) examine volatility. Their findings motivate separate regional outcomes: average growth and growth stability. A region can experience rapid but volatile expansion, so a positive association with growth would not necessarily imply improved resilience. These outcomes should be examined independently in a future empirical extension.





Uzbekistan's external position also illustrates why aggregate export earnings need careful interpretation. The IMF's 2026 country assessment attributes the improvement in the 2025 current account partly to non-gold export growth, high gold prices and remittances (IMF, 2026). These are different channels. Gold-price changes can strengthen aggregate external indicators without establishing broader regional productive upgrading, while remittances may affect local demand through channels outside merchandise exports.

Policy should consequently begin with a regional diagnosis. Where firms lack reliable electricity, finance or market access, supporting additional products alone may have limited effects. Public interventions can focus on shared constraints such as testing facilities, transparent customs procedures, skills and transport connections. The appropriate priorities should follow documented bottlenecks and expected public benefits rather than an assumption that every region needs an identical export structure.

Export support should also be evaluated through outcomes beyond gross sales. Relevant indicators include sustained participation in foreign markets, productivity, formal employment and domestic supplier purchases. A time-limited pilot with clear eligibility and an evaluation design would provide stronger evidence than export targets alone. Such evaluation must consider displacement: assistance to selected firms can redirect activity from unsupported firms rather than create additional national output.

The main limitations are the illustrative regional sample, reliance on nominal export values and absence of a verified product-level panel. Reported exports can be affected by prices, exchange-rate valuation, reporting changes and territorial attribution. Regional GDP revisions further require consistency checks. These limitations rule out causal or population-wide generalisation from the table. They do not invalidate the descriptive arithmetic, but they define the questions it can answer.

5. Conclusion

Export diversification offers a useful link between international trade, macroeconomic exposure and regional development. The comparison of selected Uzbekistan regions reveals different export trajectories, while the analytical synthesis identifies learning, supplier linkages, investment and differentiated shock exposure as potential mechanisms. The article does not establish that diversification caused regional growth: aggregate export values cannot measure product diversity, and current-price regional output cannot identify real growth without further adjustment.

A regional strategy should distinguish export scale from export composition and assess whether new activities build durable capabilities and local value creation. The next empirical step





is a harmonised region–product–year dataset matched to real output per capita, followed by transparent sensitivity analysis. Until that evidence is available, the case for diversification remains conditional rather than a quantified regional effect.

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