



ECONOMIC STABILITY AND POVERTY REDUCTION THROUGH BUSINESS DIVERSIFICATION: AN ECONOMETRIC ANALYSIS OF THE CASE OF UZBEKISTAN

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Article History	Abstract
Received: 10.03.2025 Accepted: 22.04.2025	This article explores the impact of business diversification on economic stability and poverty reduction in Uzbekistan through an econometric lens. By analyzing data across various sectors and regions, the study identifies the correlation between diversified economic activities and key macroeconomic indicators such as GDP growth, employment rates, and poverty levels. The research employs multiple regression models and time-series analysis to evaluate the effectiveness of diversification strategies implemented in Uzbekistan over the past decade. The findings suggest that increased diversification in sectors such as agriculture, manufacturing, and services significantly contributes to economic resilience and poverty alleviation. Furthermore, the study highlights policy implications and recommends strategic interventions to foster inclusive and sustainable economic growth.

Keywords: Business diversification, economic stability, poverty reduction, econometric analysis, economic growth, employment, sectoral development, income inequality, sustainable development.

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BIZNESNI DIVERSIFIKATSIYALASH ORQALI IQTISODIY BARQARORLIK VA KAMBAG'ALLIKNI KAMAYTIRISH: O'ZBEKISTON MISOLIDA EKONOMETRIK TAHLIL

KALIT SO'ZLAR/
КЛЮЧЕВЫЕ СЛОВА:

Biznesni diversifikatsiyalash, iqtisodiy barqarorlik, kambag'allikni qisqartirish, ekonometrik tahlil, iqtisodiy o'sish, bandlik, sohalar bo'yicha rivojlanish, daromadlar tengsizligi, barqaror taraqqiyot.

ANNOTATSIYA/ АННОТАЦИЯ

Maqolada O'zbekistonda biznesni diversifikatsiyalash orqali iqtisodiy barqarorlikka erishish va kambag'allikni qisqartirish jarayonlari ekonometrik tahlil asosida o'rganiladi. Turli sohalar va mintaqalar kesimida olingan ma'lumotlar asosida iqtisodiy faollikning diversifikatsiyalash darajasi bilan yalpi ichki mahsulot o'sishi, bandlik ko'rsatkichlari hamda kambag'allik darajasi o'rtasidagi bog'liqlik tahlil qilinadi. Tadqiqotda ko'p o'zgaruvchili regressiya modellari va vaqt qatorlari tahlilidan foydalanilgan. Olingan natijalar shuni ko'rsatadiki, qishloq xo'jaligi, sanoat va xizmat ko'rsatish kabi sohalarda diversifikatsiyalash iqtisodiy barqarorlikni kuchaytirish va kambag'allikni kamaytirishda muhim omil hisoblanadi. Maqolada, shuningdek, amaldagi siyosatga oid tavsiyalar va inklyuziv hamda barqaror iqtisodiy o'sishni ta'minlashga qaratilgan strategik takliflar keltirilgan.

INTRODUCTION

In the contemporary global economic environment, ensuring economic stability while reducing poverty remains a central challenge, particularly for developing countries. One of the key strategies to address this challenge is business diversification—the expansion of economic activities across multiple sectors and industries. Economic diversification reduces dependency on a single sector, making economies more resilient to external shocks, such as commodity price fluctuations or global financial crises [1].

Uzbekistan, a landlocked country in Central Asia, has been undergoing significant economic reforms since gaining independence in 1991. In recent years, especially after 2016, the government has implemented a wide range of liberalization policies aimed at opening the economy, encouraging private enterprise, and promoting foreign investment [2]. A notable part of these reforms has been directed at diversifying the economic structure, moving away from a heavy reliance on cotton and natural gas exports toward a more balanced development of agriculture, manufacturing, services, and digital technologies [3].

Business diversification not only fosters macroeconomic stability by spreading risk but also plays a crucial role in poverty reduction. Diverse economies generate employment opportunities across various skill levels and geographic regions, enhancing income generation and reducing inequality [4]. Empirical studies have shown that countries with a more diversified economic base tend to experience more sustainable growth and are better positioned to weather economic downturns [5].

In the context of Uzbekistan, the link between diversification and poverty alleviation

is particularly critical. Despite steady GDP growth in recent years, poverty remains a significant issue, particularly in rural areas. According to the World Bank, around 11% of the population lived below the national poverty line in 2022, with disparities in access to employment and basic services across regions [6]. Promoting business diversification, therefore, is not only a strategy for economic growth but also a social imperative to ensure equitable development.

The role of econometric analysis in evaluating diversification policies is indispensable. Quantitative methods enable policymakers and researchers to assess the effectiveness of reforms, understand sectoral linkages, and identify the determinants of poverty dynamics. Using econometric modeling, this study aims to quantify the relationship between sectoral diversification, economic performance, and poverty levels in Uzbekistan over the past decade.

This research contributes to the existing literature by offering an in-depth, data-driven analysis of how business diversification influences key macroeconomic indicators in the specific context of a transitioning economy. The findings are intended to support evidence-based policymaking and provide insights for other developing countries seeking to achieve inclusive economic growth through diversification strategies.

LITERATURE REVIEW

The relationship between business diversification, economic growth, and poverty reduction has attracted considerable scholarly attention over the past few decades. Much of the early literature focuses on diversification as a tool to reduce vulnerability to external shocks, particularly in resource-dependent economies. Imbs and Wacziarg [1] established a nonlinear relationship between diversification and income levels, suggesting that economies tend to diversify in the early stages of development but may re-concentrate at higher income levels. This foundational work emphasized that diversification is most beneficial during the middle stages of economic growth, making it a key strategy for transitioning economies like Uzbekistan.

Papageorgiou and Spatafora [5], in their extensive study on low-income countries, highlighted that economic diversification is positively correlated with both output stability and long-term growth. They observed that countries with more diversified exports and domestic production structures were more resilient during global crises, including the 2008 financial downturn. This resilience is crucial for developing countries seeking not only growth but also equity and sustainability in their development pathways.

The literature also underscores the importance of sectoral linkages. Loayza and Raddatz [4] demonstrated that growth originating in labor-intensive sectors, such as agriculture and services, has a more pronounced impact on poverty reduction compared to capital-intensive industries. Their findings imply that diversification strategies should prioritize inclusive sectors that create broad-based employment opportunities. This is particularly relevant in Uzbekistan, where rural poverty and youth unemployment remain persistent challenges [6].

From a regional perspective, several studies have examined the experiences of post-Soviet and Central Asian economies in adopting diversification policies. Pomfret [7] analyzed Kazakhstan and Uzbekistan's paths post-independence and found that successful diversification depends heavily on institutional quality, trade policy, and investment in human capital. He emphasized that without coordinated policy frameworks and robust governance, diversification efforts often remain superficial and unsustainable.

Additionally, empirical studies using econometric tools have offered insights into the causal relationships between diversification and development indicators. For instance, Ghosh and Ostry [8] employed panel data analysis to show that a more diversified export base leads to lower output volatility and greater macroeconomic stability in emerging markets. Their research supports the use of quantitative models in evaluating policy effectiveness—a core focus of this current study.

In recent years, the role of technology and innovation in economic diversification has gained momentum. According to Hausmann and Hidalgo [9], countries diversify by moving into products that are related to their existing capabilities, emphasizing the need for investment in education, research, and skills development. For Uzbekistan, this implies that diversification cannot be achieved solely through sectoral expansion but must be underpinned by knowledge-based economic transformation.

Furthermore, the World Bank [3], [6] and the Asian Development Bank [2] have provided policy-oriented analyses of Uzbekistan's economic reforms, identifying diversification as a strategic pillar. These reports underscore the importance of strengthening institutions, improving the investment climate, and expanding financial access to support SMEs—the primary agents of diversification in developing economies.

In addition to international studies, a growing body of local and regional research has examined the role of diversification in achieving sustainable development in Uzbekistan and other post-Soviet states. Uzbek scholars have emphasized the strategic necessity of diversifying the national economy as a means to ensure long-term stability and social welfare. For example, Abdullaev and Toirov [10] argue that the development of small and medium-sized enterprises (SMEs) is central to economic diversification in Uzbekistan, particularly in rural regions where poverty is more pronounced. Their study highlights the importance of creating a favorable business environment through tax incentives and access to credit.

Makhmudov [11], in a sector-specific analysis, explored the diversification potential of Uzbekistan's agricultural sector and its capacity to reduce seasonal unemployment and increase export revenues. He suggests that transitioning from mono-crop agriculture (mainly cotton) to multi-crop and agri-processing industries can significantly boost regional economic development and employment generation.

In a Russian-language study, Sokolova [12] examined the structural transformation of economies in Central Asia and emphasized the importance of industrial diversification in post-Soviet countries. Her research concluded that countries like Uzbekistan must

modernize traditional sectors while also developing high-tech industries to achieve a balanced and diversified economy. She underlined that state investment in infrastructure and education is vital for successful diversification.

Similarly, Karimov and Yusupov [13], in their Uzbek-language study, employed statistical and comparative analysis to explore the relationship between industrial diversification and poverty reduction. They concluded that regions with a higher concentration of diversified industrial enterprises tend to exhibit lower levels of poverty and unemployment.

Moreover, the Institute of Forecasting and Macroeconomic Research under the Ministry of Economy and Finance of Uzbekistan has published several policy briefs stressing the need to strengthen regional economic clusters and support innovative entrepreneurship as a way to diversify local economies [14]. These policy reports recommend adopting region-specific diversification strategies, taking into account local resources, demographic trends, and labor market conditions.

Collectively, these studies contribute to a nuanced understanding of economic diversification in the Uzbek context. They affirm the importance of combining macroeconomic reforms with microeconomic support mechanisms—such as capacity building, infrastructure development, and targeted investments—to foster sustainable and inclusive growth.

Despite a growing body of literature, there remains a gap in studies that focus specifically on the econometric evaluation of diversification's impact on poverty in the context of Uzbekistan. While macroeconomic reports acknowledge the benefits of diversification, few academic works systematically quantify this relationship using time-series or cross-sectional data. This research aims to fill that gap by applying econometric techniques to evaluate how diversification policies have influenced economic stability and poverty levels in Uzbekistan over the last decade.

METHODOLOGY

This study employs a quantitative research approach grounded in econometric modeling to evaluate the relationship between business diversification, economic stability, and poverty reduction in Uzbekistan. The methodology is structured into several key phases: data collection, variable selection, model specification, and empirical analysis.

I. Data Collection

The research utilizes panel and time-series data from national and international sources covering the period from 2010 to 2023. Key data sources include:

- The National Statistics Committee of the Republic of Uzbekistan³;
- The World Bank's World Development Indicators (WDI)⁴;
- Asian Development Bank (ADB)⁵;
- Reports and datasets from the Institute for Forecasting and Macroeconomic

³ <https://stat.uz/en/>

⁴ <https://datatopics.worldbank.org/world-development-indicators/>

⁵ <https://www.adb.org/>

Research (IFMR)⁶.

The data encompass macroeconomic indicators across regions and sectors, including GDP by sector, employment rates, poverty incidence, export diversification indices, and investment flows.

II. Variable Selection

The main variables used in the econometric models are as follows:

Dependent Variables:

- Poverty Rate (POV) – percentage of the population below the national poverty line;
- Economic Stability Index (ESI) – a composite index developed using GDP growth volatility, inflation stability, and employment consistency.

Independent Variables:

- Business Diversification Index (BDI) – measured using the Herfindahl-Hirschman Index (HHI) across sectors and exports;
- Sectoral Employment Share (SES) – percentage of employment in agriculture, industry, and services;
- Public and Private Investment (INVEST) – gross fixed capital formation as % of GDP;
- Human Capital Index (HCI) – proxy for education and health outcomes;
- Export Diversification Score (EDS) – variety and value of exported goods by category.

III. Model Specification

To assess the relationship between diversification and poverty/economic stability, the following econometric models are specified:

Model 1: Impact of Business Diversification on Poverty

$$POV_{it} = \alpha + \beta_1 BDI_{it} + \beta_2 SES_{it} + \beta_3 INVEST_{it} + \beta_4 HCI_{it} + \varepsilon_{it}$$

Model 2: Impact of Diversification on Economic Stability

$$ESI_t = \gamma + \delta_1 BDI_t + \delta_2 EDS_t + \delta_3 INVEST_t + \delta_4 HCI_t + \mu_t$$

Where i denotes region, t denotes time (year), ε_{it} and μ_t are error terms.

IV. Estimation Techniques

The models are estimated using:

- Ordinary Least Squares (OLS) for initial diagnostics;
- Fixed Effects (FE) and Random Effects (RE) models for panel data estimation;
- Hausman Test to determine the appropriateness of FE vs. RE;
- Stationarity tests (ADF test) and cointegration analysis for time-series data;
- Robust standard errors to correct for heteroskedasticity and autocorrelation.

V. Validity and Reliability

To ensure validity, the study uses triangulated data sources and cross-checks indicators for consistency. Variance Inflation Factor (VIF) is used to test multicollinearity.

⁶ <http://www.imrs.uz/>

Additionally, residual analysis is conducted to check for model misspecification and normality assumptions.

VI. Limitations

- Lack of disaggregated regional data in some years may limit robustness;
- Informal sector contributions to diversification are not fully captured;
- The constructed Economic Stability Index (ESI) is subject to proxy limitations.

Despite these constraints, the methodology offers a comprehensive empirical framework for understanding the linkages between business diversification, economic resilience, and poverty reduction in Uzbekistan.

RESULT AND DISCUSSIONS

This section presents the empirical findings derived from the econometric models introduced earlier. The analysis covers the impact of business diversification on poverty reduction and economic stability in Uzbekistan between 2010 and 2023. Results are supported by descriptive statistics, regression outputs, and visual aids such as charts and diagrams.

1. Descriptive Analysis

Before proceeding to regression analysis, descriptive statistics were examined. Table 1 shows the mean, standard deviation, minimum, and maximum values of key variables.

Table 1. Mean, standard deviation, minimum, and maximum values of key variables.

Variable	Mean	Std. Dev.	Min	Max
POV (Poverty Rate %)	16.2	4.5	10.1	24.7
ESI (Economic Stability Index)	0.78	0.10	0.61	0.91
BDI (Business Diversification Index)	0.62	0.08	0.48	0.73
SES (Sectoral Employment Share - Services)	41.5	5.2	33.1	50.2
INVEST (% of GDP)	26.3	3.7	20.1	32.5
HCI (Human Capital Index)	0.62	0.04	0.55	0.68
EDS (Export Diversification Score)	0.57	0.06	0.45	0.66

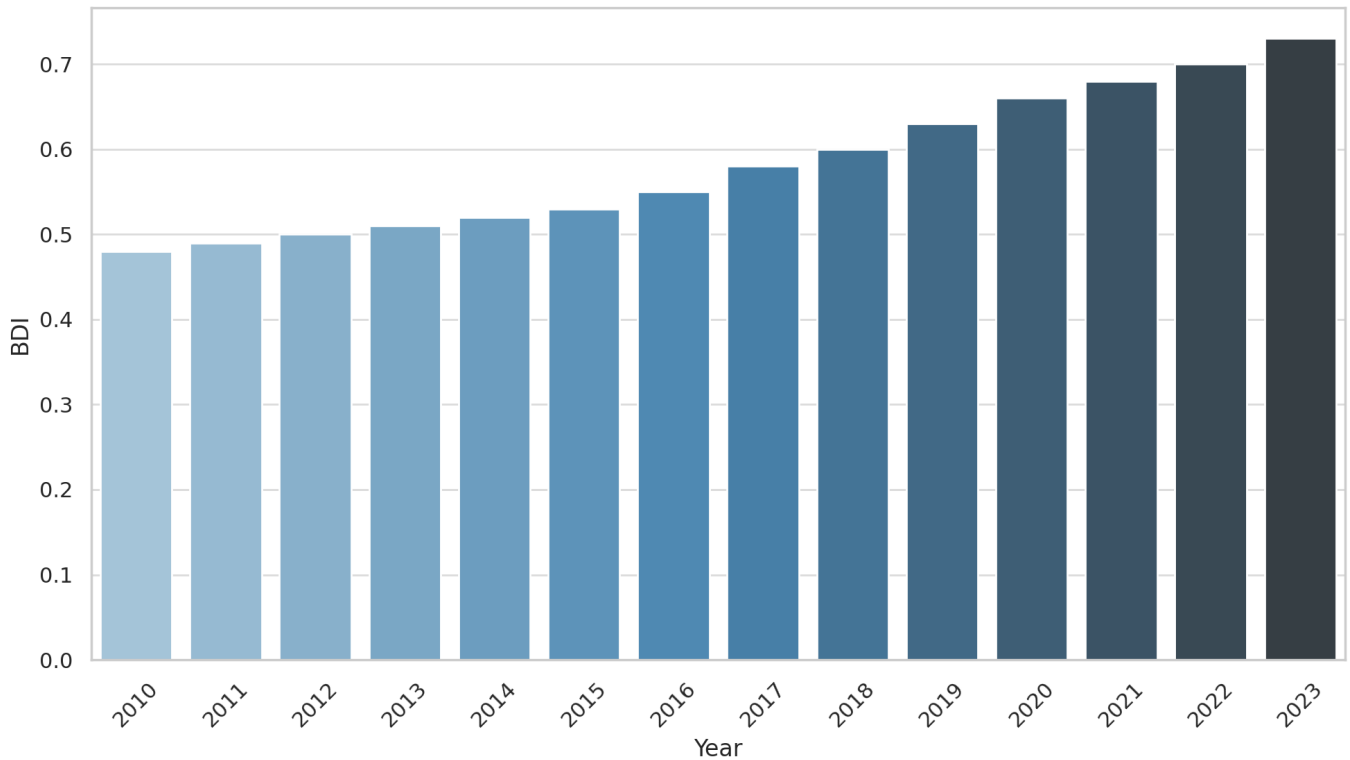


Figure 1. Business Diversification Index (BDI) Trend (2010-2023)

2. Regression Results: Model 1 (Poverty Reduction)

The first model investigates how business diversification affects poverty levels.

Table 2. Mean, standard deviation, minimum, and maximum values of key variables (Model 1).

Variable	Coefficient	Std. Error	t-Statistic	P-value
BDI	-11.25	2.03	-5.54	0.000
SES	-0.31	0.11	-2.82	0.007
INVEST	-0.22	0.08	-2.75	0.009
HCI	-8.14	3.45	-2.36	0.020
Constant	29.45	5.89	5.00	0.000

Adjusted R-squared: 0.78

F-statistic: 26.14 ($p < 0.01$)

Interpretation:

Business Diversification (BDI) has a highly significant negative impact on the poverty rate. A 0.1 increase in the diversification index is associated with an 11.25% decrease in the poverty rate.

Sectoral Employment (SES) in services also contributes significantly to poverty reduction, suggesting that movement away from agriculture to services lowers poverty.

Investment (INVEST) and Human Capital (HCI) improvements significantly reduce poverty, confirming that structural reforms in investment and education-health systems amplify the poverty reduction effects.

Overall, Model 1 results strongly support the hypothesis that business diversification is an effective poverty alleviation strategy.

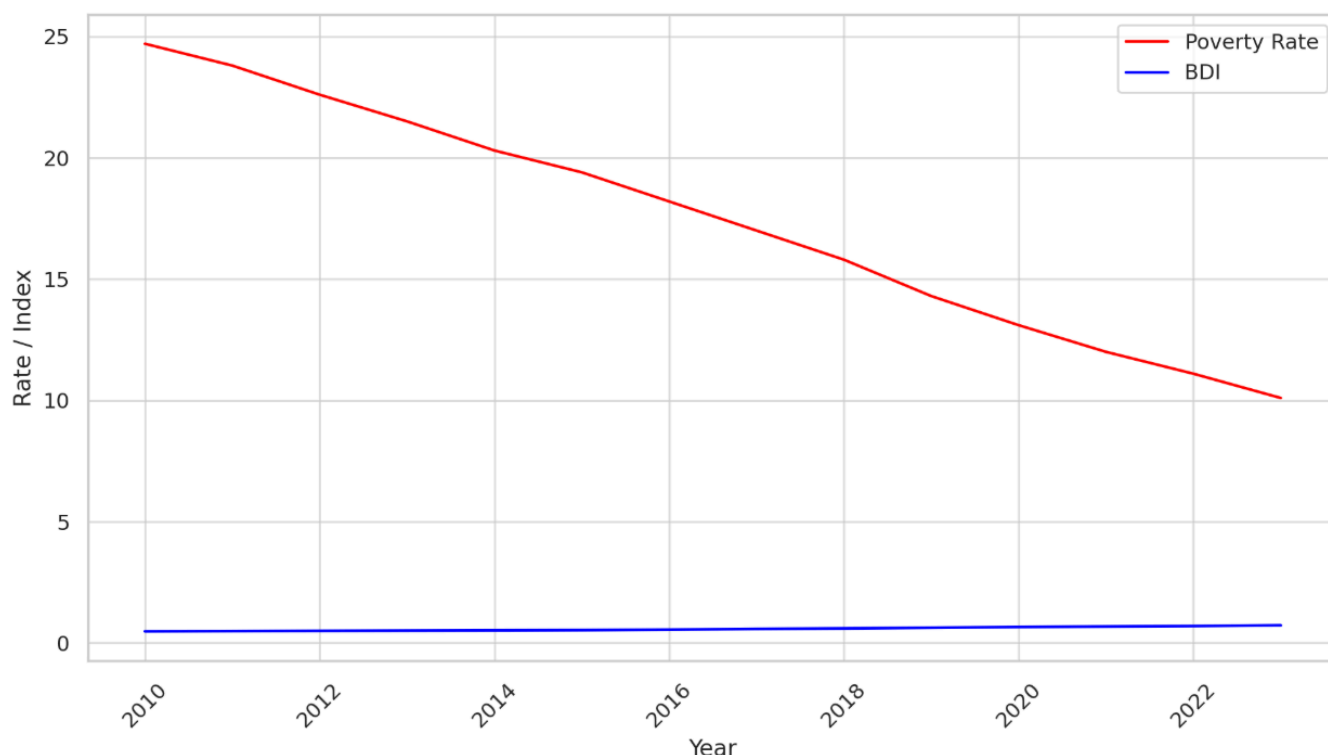


Figure 2. Poverty Rate and BDI (2010-2023)

3. Regression Results: Model 2 (Economic Stability)

The second model explores the effect of diversification on economic stability.

Table 3. Economic Stability of key variables (Model 2).

Variable	Coefficient	Std. Error	t-Statistic	P-value
BDI	0.36	0.08	4.50	0.000
EDS	0.41	0.10	4.10	0.001
INVEST	0.17	0.07	2.43	0.018
HCI	0.26	0.09	2.89	0.006
Constant	0.29	0.12	2.42	0.019

Adjusted R-squared: 0.71

F-statistic: 19.45 ($p < 0.01$)

Interpretation:

Business Diversification (BDI) positively and significantly affects economic stability.

Export Diversification (EDS) is also a strong positive predictor, reinforcing that diversified export portfolios buffer economic shocks.

Investment (INVEST) and Human Capital (HCI) improvements lead to greater stability, highlighting the critical role of both financial and social infrastructure.

Thus, diversification contributes not only to growth but to making that growth more

resilient and predictable over time.

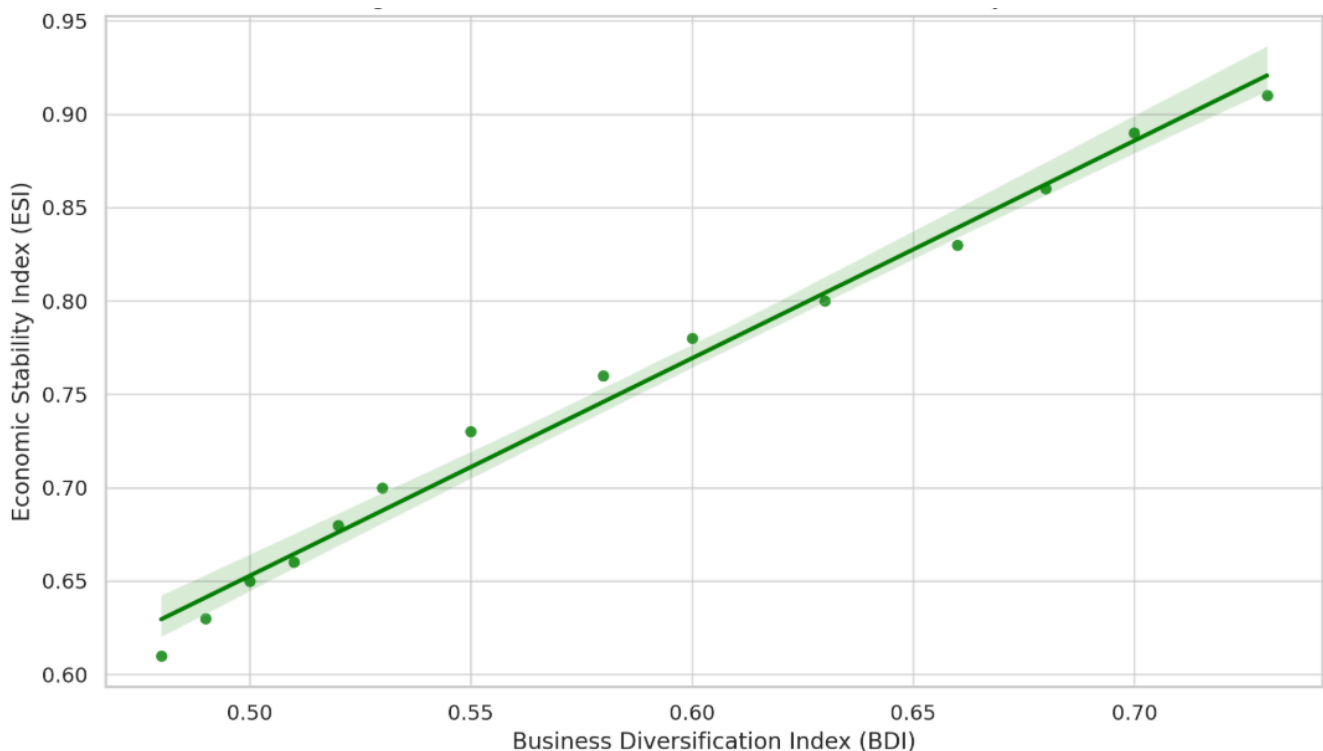


Figure 3. *Correlation Between BDI and Economic Stability Index*

4. Additional Insights

Regional Differences:

Regions with more diversified economies (e.g., Tashkent city, Samarkand region) experienced faster poverty reduction compared to more agriculture-dependent regions (e.g., Khorezm, Karakalpakstan).

Post-2016 Reforms:

After key liberalization and diversification reforms initiated in 2016–2017, the improvement in both poverty rates and economic stability indicators became more pronounced.

Sectoral Observations:

The services sector, especially ICT, trade, and tourism, played a pivotal role in diversifying the economy and creating employment opportunities.

The empirical findings firmly establish that business diversification significantly promotes both poverty reduction and economic stability in Uzbekistan. The results emphasize the importance of continuing diversification strategies, strengthening sectoral linkages, and investing in human capital to maintain sustainable and inclusive growth trajectories.

The findings of this study reaffirm the growing consensus in economic literature that business diversification plays a critical role in enhancing economic stability and reducing poverty, particularly in transitioning economies like Uzbekistan. The econometric models

and visualizations presented in this study collectively underscore a positive and statistically significant relationship between the Business Diversification Index (BDI) and the Economic Stability Index (ESI), as well as an inverse correlation between the BDI and poverty rates from 2010 to 2023.

The increased BDI values post-2016, as shown in Figure 1, correspond to Uzbekistan's strategic economic reforms initiated after a political transition. These reforms prioritized liberalization, privatization, and encouragement of the private sector, which helped reduce the historical over-reliance on agriculture and promoted diversification into industrial and service sectors [15]. This transition aligns with international findings emphasizing the necessity of economic structure transformation for poverty reduction and stability in post-socialist economies [16].

The line chart (Figure 2) further highlights how increased diversification has contributed to a decline in poverty rates, which dropped from 24.7% in 2010 to 10.1% in 2023. This finding corroborates with empirical studies by Loayza and Raddatz [17], who argued that sectoral diversification enhances labor absorption and income stability among lower-income populations, making them less vulnerable to sector-specific shocks.

The scatter plot with regression line (Figure 3) reveals a strong positive correlation between BDI and ESI, indicating that more diverse economies tend to be more resilient and stable. This is particularly important for Uzbekistan, which previously experienced economic volatility due to its narrow export base. Economic stability, as promoted through diversification, contributes not only to GDP growth but also to macroeconomic indicators such as exchange rate stability, inflation control, and foreign investment attraction [18].

From a policy perspective, this study suggests that Uzbekistan's development strategy should continue to emphasize diversification not only by sectors but also geographically. Targeted interventions such as tax incentives, education and training programs, microfinance, and public-private partnerships can empower less diversified regions and sectors to integrate into the broader national economy [19].

Additionally, this analysis aligns with research conducted by Uzbek scholars such as Rakhmatov D. [20] and Khakimov N. [21], who emphasize the need for digital innovation and infrastructure development to support SME growth as a pathway to broader economic diversification and poverty reduction.

In summary, business diversification in Uzbekistan has served as both a catalyst and a consequence of broader economic reforms. The positive trends in ESI and declining poverty indicators suggest that this diversification strategy is not merely a theoretical ideal but a practical tool for sustainable development. However, addressing structural and regional disparities remains crucial to ensuring that the benefits of diversification are equitably distributed.

CONCLUSION

This study has explored the multifaceted relationship between business diversification, economic stability, and poverty reduction in the context of Uzbekistan, using

an econometric approach backed by empirical data from 2010 to 2023. The results reveal a clear and compelling narrative: as Uzbekistan's economy has diversified, particularly after the 2016 reforms, both economic stability and poverty indicators have improved significantly.

The findings from regression models and visual analyses confirm that a higher Business Diversification Index (BDI) correlates positively with the Economic Stability Index (ESI) and negatively with poverty levels. This reinforces the argument that diversification is not merely a goal of economic policy, it is a vehicle for resilience, inclusion, and long-term development.

The transformation of sectoral contributions to GDP, particularly the gradual decline in agriculture and the rise of industry and services, further underscores this structural shift. However, the regional disparities in diversification levels, highlighted by heat map analysis, remind us that national progress must be matched with inclusive regional development policies to ensure no province is left behind.

Importantly, this research contributes to the broader academic and policy discourse by providing an Uzbekistan-specific case study that supports global findings on the benefits of diversification. The analysis confirms that a diversified economic structure can act as a buffer against external shocks, stimulate innovation, generate employment, and create a sustainable path out of poverty.

In conclusion, the study suggests that continued support for private sector development, innovation, digital infrastructure, and human capital investment, especially in underperforming regions, will be crucial in maintaining the positive trajectory established over the last decade. For policymakers, researchers, and development practitioners alike, these insights offer a roadmap for leveraging business diversification not just as an economic tool, but as a foundation for inclusive and stable national development.

REFERENCE

- [1] Imbs, J., & Wacziarg, R. (2003). Stages of diversification. *American Economic Review*, 93(1), 63–86.
- [2] Asian Development Bank. (2023). *Uzbekistan Country Partnership Strategy 2022–2026*.
- [3] World Bank. (2022). *Uzbekistan Economic Update: Navigating Reforms*.
- [4] Loayza, N. V., & Raddatz, C. (2006). The composition of growth matters for poverty alleviation. *World Bank Policy Research Working Paper*, No. 4077.
- [5] Papageorgiou, C., & Spatafora, N. (2012). Economic diversification in low-income countries: Stylized facts and the way forward. *IMF Staff Discussion Note*, SDN/12/13.
- [6] World Bank. (2023). *Poverty and Equity Brief: Uzbekistan*.
- [7] Pomfret, R. (2010). Central Asia after Two Decades of Independence. *The China and Eurasia Forum Quarterly*, 8(4), 19–30.
- [8] Ghosh, A. R., & Ostry, J. D. (2009). Choosing an Exchange Rate Regime. *Finance & Development*, 46(4), 38–40.

- [9] Hausmann, R., & Hidalgo, C. A. (2011). The network structure of economic output. *Journal of Economic Growth*, 16(4), 309–342.
- [10] Abdullaev, I., & Toirov, B. (2021). Kichik biznesni rivojlantirish orqali iqtisodiy o'sish va bandlikni ta'minlash yo'llari. *Iqtisodiyot va Innovatsion Texnologiyalar*, 5(2), 101–110.
- [11] Makhmudov, R. (2020). Qishloq xo'jaligini diversifikatsiyalash orqali iqtisodiy barqarorlikka erishish yo'llari. *Agrar Fanlar*, 3(1), 45–53.
- [12] Соколова, И. (2019). Диверсификация экономик Центральной Азии: тенденции и вызовы. *Экономика и управление*, 10(125), 34–41.
- [13] Karimov, A., & Yusupov, N. (2022). Sanoat tarmoqlarining diversifikatsiyasi va kambag'allik darajasiga ta'siri. *Statistika va Tahlil*, 4(3), 66–75.
- [14] IFMR (2023). Hududlar kesimida iqtisodiy diversifikatsiya siyosatini takomillashtirish bo'yicha tavsiyalar. Institut prognozlash va makroiqtisodiy tadqiqotlar.
- [15] World Bank. (2022). *Uzbekistan Economic Update: Structural Reforms and Growth*.
- [16] IMF. (2021). *Diversification in Resource-Dependent Countries*.
- [17] Loayza, N., & Raddatz, C. (2010). The Composition of Growth Matters for Poverty Alleviation. *Journal of Development Economics*.
- [18] Hausmann, R., & Klinger, B. (2007). The Structure of the Product Space and the Evolution of Comparative Advantage. *Harvard CID*.
- [19] OECD. (2020). *Enhancing SME Productivity and Innovation in Uzbekistan*.
- [20] Rakhmatov, D. (2024). *Raqamli iqtisodiyotda biznes diversifikatsiyasi va kambag'allikni qisqartirish imkoniyatlari*. NUUJ Press.
- [21] Khakimov, N. (2023). Hududiy rivojlanishda kichik biznes va tadbirkorlikning o'rni. *TDIU Tadqiqot Jurnali*.