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An Analysis Of The Macroeconomic Indicators Of Fergana Region

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Abstract: In the contemporary economic landscape of Uzbekistan, investigating the socio-economic development of regions, particularly the dynamics of macroeconomic indicators in major territories, possesses profound scientific and practical significance. This urgency arises because regional development imbalances, the sluggish growth of specific sectors, and foreign trade complications exert a direct and substantial influence on the overall economic stability of the nation. This paper provides a comprehensive analysis of the core macroeconomic indicators of the Fergana Region spanning the period from 2010 to 2025, specifically examining Gross Regional Product (GRP), industrial output, agricultural production, fixed capital investments, construction activities, the services sector, and foreign trade dynamics. The empirical findings reveal that the GRP of the Fergana Region expanded 20.5-fold, rising from 5,417.5 billion soums in 2010 to 111,305.3 billion soums by 2025. The services sector exhibited the most substantial growth, increasing 48.8-fold, while fixed capital investments demonstrated a 34.9-fold increase. Concurrently, foreign trade turnover escalated from 953.7 million dollars to 2,668.4 million dollars; however, the trade balance remained persistently negative, reaching –504.2 million dollars in 2025, which underscores an ongoing challenge regarding import dependency. To address these systemic vulnerabilities, this study formulates scientifically grounded proposals aimed at developing import-substituting manufacturing industries, diversifying export portfolios, and strategically directing capital investments towards high-value-added projects.

Keywords: Fergana Region, Gross Regional Product, macroeconomic indicators, economic growth, foreign trade, import substitution.

Introduction: The role of regions within the economy of the Republic of Uzbekistan has been expanding progressively in recent years. In particular, the Fergana Region stands out as one of the largest territories in terms of population size, characterized by highly developed industrial, agricultural, and services sectors. Consequently, the comprehensive study of the macroeconomic indicators of this region holds profound scientific and practical significance for identifying regional development tendencies, enhancing the efficacy of localized economic policies, and mitigating inter-regional disparities.

Furthermore, the Decree of the President of the Republic of Uzbekistan, No. PF-60, dated 28 January 2022, entitled "On the Development Strategy of New Uzbekistan for 2022–2026", explicitly outlines critical objectives aimed at accelerating the socio-economic development of the regions, narrowing the developmental gaps between various territories, and substantially reinforcing the revenue base of local budgets. From this perspective, conducting a profound economic analysis of the macroeconomic indicators of the Fergana Region and delineating its long-term development prospects is of paramount importance for national strategic planning.

Literature Review

The systemised analysis of the relevant literature on this subject demonstrates that a substantive body of scientific research has been dedicated to regional macroeconomic analysis. In his scholarly article entitled "Modernisation of the Real Sector of the Economy" (2010), A.G. Aganbegyan focuses extensively on the multidimensional issues surrounding the modernising processes within the real sector, asserting that the real sector of the economy serves as the primary engine driving national economic growth [1]. From his perspective, achieving sustained and resilient economic growth is virtually unattainable without executing comprehensive technical and technological updates across industrial enterprises. Furthermore, A. Komov (2013), in his paper "Analysis of the System of Lending to the Real Sector of the Economy", investigates the direct impact of the credit system on the real sector, noting that the conservative credit policies maintained by commercial banking institutions substantially hinder the development and expansion of small business entities [2].

In international economic practice, the comprehensive analysis of Gross Regional Product (GRP) is widely conceptualised as a pivotal and core benchmark of regional development. Within their seminal work, "Regional Economics and Policy" (2017), Armstrong and Taylor substantiate the proposition that the state's regional policy plays a crucially important role in mitigating and eradicating deep-seated inter-regional imbalances [5].

The specific role of territories within the wider economy of Uzbekistan, particularly the structural significance of the Fergana Valley, has been examined in several domestic studies. For instance, Karimov (2020), in his comprehensive textbook "Regional Economy and Territorial Management", evaluates the overarching economic potential of the Fergana Region and outlines strategic pathways for its subsequent development [3]. Similarly, Tursunov (2022), in his analytical paper "Structural Analysis of the Economy of the Fergana Valley", highlights that whilst the share of the services sector in the valley is experiencing progressive growth, the structural competitiveness of the industrial sector remains relatively low [4]. Nevertheless, a holistic, long-term dynamic analysis of the macroeconomic performance of the Fergana Region covering the period up to 2025 has not yet been sufficiently investigated. Consequently, the present research article is specifically designed to fill this existing scientific gap in the literature.

Methodology

In order to ensure a comprehensive and scientifically rigorous evaluation of the socioeconomic development of the Fergana Region, this research employs a diversified combination of quantitative and qualitative economic methods. The methodological framework of this study is grounded in the fundamental principles of regional economics, macroeconomic analysis, and statistical processing. The core empirical analysis is built upon a longitudinal research design covering a fifteen-year period from 2010 to 2025, which allows for the identification of sustainable long-term trends, structural shifts, and cyclical patterns within the regional economy.

The secondary data utilized for this investigation were systematically compiled from official statistical publications and databases provided by the Statistics Agency under the President of the Republic of Uzbekistan, as well as the regional statistical department of the Fergana Region. The collection and processing of the macroeconomic indicators were executed using the following specialized analytical methods:

— Dynamic and Trend Analysis: This method was applied to track the longitudinal trajectory and continuous growth rates of key macroeconomic variables—such as Gross Regional Product (GRP), industrial production volumes, agricultural outputs, fixed capital investments, and the volume of services—over the designated historical timeline.

— Structural and Component Analysis: This approach was utilized to evaluate the internal shifts within the GRP, examining the changing shares and relative contributions of the primary, secondary, and tertiary sectors to determine the extent of economic diversification in the region.

— Comparative and Statistical Analysis: This method facilitated the comparison of growth velocities between different economic sectors, allowing for the calculation of relative expansion factors (e.g., the specific fold-increases in investments and services) and the identification of structural imbalances.

— Balance Method: This analytical tool was specifically deployed within the evaluation of foreign trade activity to examine the relationship between export volumes and import values, thereby calculating the net trade balance (saldo) and assessing the structural import dependency of the regional market.

To guarantee mathematical consistency and eliminate the distorting effects of inflationary pressures across the fifteen-year period, all values originally recorded in current prices were converted and verified using official deflator indices. The synthesised data were subsequently structured into comparative matrices to formulate scientifically grounded conclusions and strategic policy recommendations for the sustainable development of the region.

Results and discussion

The empirical scientific investigation incorporates specialized statistical processing methodologies, encompassing dynamic longitudinal series, growth rate computation techniques, trend estimation parameters, and comparative economic metrics. The foundational dataset utilized for this comprehensive analysis is derived from the official macroeconomic registration repositories of the Statistics Agency under the President of the Republic of Uzbekistan, spanning the chronological timeframe from 2010 to 2025.

Table 1: Core Macroeconomic Indicators of the Fergana Region

Year	Gross Regional Product	Growth rate, %	Industrial output	Growth rate, %	Consumer goods	Growth rate, %	Services	Growth rate, %	Foreign trade turnover	Growth rate, %	Balance
Unit	billion soums	%	billion soums	%	billion soums	%	billion soums	%	million USD	%	million USD
2010	5,417.5	106.7	3,265.5	94.5	1,136.8	109.7	1,471.3	121.1	953.7	94.1	-50.2
2011	7,228.5	109.6	4,120.1	102.0	1,393.7	103.3	2,041.8	121.4	1,090.9	114.4	-226.6
2012	9,113.0	106.7	4,596.9	100.7	1,584.8	103.2	2,707.0	118.6	971.2	89.0	-211.9
2013	10,966.4	107.5	5,290.8	105.7	1,961.5	103.0	3,532.0	121.5	1,050.5	108.2	-217.0
2014	13,549.5	107.3	6,596.4	108.9	2,293.5	107.0	4,472.8	120.3	968.3	92.2	-82.6
2015	16,342.4	107.3	7,170.2	104.0	2,888.1	113.1	5,256.0	118.1	1,167.8	120.6	-404.3
2016	18,106.3	105.4	8,040.7	101.6	3,316.3	112.5	6,670.7	117.7	873.2	74.8	-82.9
2017	25,148.1	98.9	9,728.5	94.9	3,740.8	106.5	7,602.2	104.9	949.4	108.7	78.6
2018	33,037.2	107.4	13,613.8	106.3	4,530.1	101.3	9,237.9	108.0	1,353.6	142.6	-385.1
2019	40,207.5	106.1	18,661.2	102.6	7,216.3	102.4	11,684.1	113.0	1,417.8	104.7	-268.9
2020	45,653.1	105.3	21,701.2	104.2	10,360.9	111.4	13,694.4	105.3	1,463.1	103.2	-350.9
2021	58,406.3	108.3	27,761.5	108.5	11,763.9	111.2	17,705.2	117.4	1,835.6	125.5	-233.0
2022	68,370.1	105.8	30,303.5	104.5	7,634.9	100.5	22,131.8	114.7	2,063.9	112.4	-405.3
2023	81,573.3	105.7	35,794.9	106.0	9,277.0	102.0	26,592.8	110.5	1,979.2	95.9	-611.4
2024	93,605.7	105.2	45,896.1	104.3	x	x	55,547.6	113.1	2,171.3	109.7	-499.1
2025 January–December*	111,305.3	108.1	59,364.4	107.3	x	x	71,765.9	114.4	2,668.4	122.9	-504.2

The analysis covers a 16-year period from 2010 to 2025. During the analysis, the main focus was placed on nominal indicators and their growth rates expressed as percentages. Chain and base growth rates were calculated in order to identify the changing tendencies of the selected indicators.

During 2010–2025, the nominal volume of the Gross Regional Product of the Fergana Region increased from 5,417.5 billion soums to 111,305.3 billion soums. This represents a 20.5-fold increase. In terms of annual growth rates, the highest values were observed in 2011, at 109.6%, and in 2025, at 108.1%. The lowest growth rate was recorded in 2017, at 98.9%, which may be associated with economic reforms and changes in statistical methodology. After 2017, stable growth was observed within the range of 105–108%.

When the main sectors of the regional economy are analyzed, industrial output increased from 3,265.5 billion soums to 59,364.4 billion soums, or approximately 18 times. During 2011–2025, industrial growth rates generally remained within the range of 102–108%. The highest growth rate was recorded in 2025, at 107.34%. The volume of agriculture, forestry, and fisheries increased from 2,709.1 billion soums to 49,733.5 billion soums, or 18.3 times. Growth rates in this sector remained relatively stable, ranging from 103% to 109%, with the highest growth observed in 2018, at 109.46%. These indicators demonstrate the steady development of industry and agriculture in the Fergana Region.

Fixed capital investments increased from 930.9 billion soums to 32,466.8 billion soums, representing a 34.9-fold increase. The highest growth rates were recorded in 2018, at 145.9%, in 2025, at 145.2%, and in 2011, at 122.7%. This indicates a high level of investment activity in the region. The volume of construction works increased from 489.2 billion soums to 19,157.0 billion soums, or approximately 39 times. The highest growth rates in construction were observed in 2010–2011, at 132.3% and 129.6%, respectively, as well as in 2025, at 117.5%.

Retail trade turnover increased from 1,911.6 billion soums to 42,194.6 billion soums, representing a 22-fold increase. Its growth rates mainly fluctuated within the range of 104–118%. The services sector demonstrated the highest growth among the analyzed indicators, increasing from 1,471.3 billion soums to 71,765.9 billion soums, or 48.8 times. Growth rates in the services sector were around 117–121% during 2010–2015 and around 114–117% during 2021–2025. Such rapid expansion of the services sector indicates that the regional economy is gradually moving toward a post-industrial stage of development.

The analysis of foreign trade indicators shows that foreign trade turnover amounted to 953.7 million USD in 2010 and reached 2,668.4 million USD in 2025. Exports increased from 451.8 million USD to 1,082.1 million USD, while imports rose from 501.9 million USD to 1,586.3 million USD. Exports increased 2.4 times, whereas imports increased 3.2 times. The trade balance was negative in almost all years, with the largest deficit recorded in 2023, at –611.4 million USD. In 2025, the balance amounted to –504.2 million USD. The faster growth of imports compared with exports and the persistent negative trade balance indicate the region's dependence on external markets and the relatively low competitiveness of local production.

The results of the analysis reveal several important tendencies. First, stable growth was observed: GRP, industrial output, services, and investment indicators increased in almost all years. Second, investments played a significant role, as the highest growth rates were observed in fixed capital investments and construction. This shows that substantial financial resources are being directed toward infrastructure and industrial projects in the region. Third, the rapid expansion of the services sector, which increased 48.8 times, indicates a structural shift toward a service-oriented economy. Fourth, foreign trade remains a major challenge: the faster growth of imports compared with exports and the persistent negative trade balance reflect the region's dependence on external markets. Fifth, the decline observed in 2017 was associated with methodological changes and economic reforms, after which the regional economy recovered and continued to grow steadily.

Conclusion and Recommendations

The comprehensive macroeconomic analysis confirms that the economy of the Fergana Region experienced sustained and robust expansion over the chronological timeframe from 2010 to 2025. This structural maturation is evidenced by a profound 20.5-fold increase in Gross Regional Product (GRP), an 18-fold expansion in industrial manufacturing output, a remarkable 48.8-fold growth in the tertiary services sector, and a substantial 34.9-fold rise in fixed capital investments. While the services sector emerged as the primary catalyst and fastest-growing vector of regional development, foreign trade operations manifested as the most critical structural vulnerability, characterized by a persistent and systemic trade deficit.

In order to institutionalize these documented macroeconomic achievements, stimulate long-term economic resilience, and strategically mitigate the structural challenges associated with the negative foreign trade balance, the following scientifically grounded proposals and policy recommendations are formulated:

— Accelerating Import-Substitution Frameworks: It is essential to stimulate the domestic production of local analogues to heavily imported goods by extending highly concessional credit facilities and targeted financial instruments to localized enterprises. Particular strategic emphasis should be directed toward constructing state-of-the-art agricultural processing facilities to minimize dependency on foreign primary and secondary food products.

— Diversifying the Export Portfolio: To decrease reliance on traditional commodity exports, targeted initiatives must be implemented to substantially expand the outbound volume of high-value services, information technology (IT) products, chemical goods, and advanced textile and apparel manufactures, while concurrently penetrating non-traditional international markets.

— Enhancing Capital Investment Efficacy: Future capital allocation strategies must be optimized by deliberately steering foreign and domestic investments toward high-value-added projects, with a specific focus on the advanced manufacturing spectrum, processing industries, and the integration of innovative technologies into production cycles.

— Strengthening Small and Medium Enterprise (SME) Support Systems: Comprehensive state assistance, including specialized tax incentives, targeted subsidies, and trade facilitation mechanisms, should be systematically granted to export-oriented small and medium business entities to enhance their competitiveness and reduce entry barriers to international markets.

— Expanding the Scope of the Tertiary Services Sector: Outbound service-sector revenue should be intensified by unlocking the latent potential of international and regional tourism—specifically leveraging the historical and architectural heritage sites of the Fergana Valley—while simultaneously upgrading localized logistics infrastructure, IT consulting, and sophisticated banking and financial services.

— Advancing Digital Transformation and Regional

Modernisation

The operational framework of the regional economy should be thoroughly digitalized through the implementation of real-time monitoring systems for macroeconomic tracking, coupled with the strategic integration of artificial intelligence (AI) technologies to optimize territorial economic management and evidence-based policymaking.

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